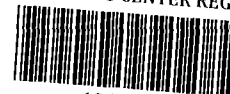


Refined Metals Corporation

US EPA RECORDS CENTER REGION 5



1002793

March 6, 1989

*Original Package
to Program
Mgt. Branch*

Mr. Hak Cho, Chief
Indiana Section
RCRA Activities
Part B Permit Application
U.S. Environmental Protection Agency
Region V
P.O. Box A3587
Chicago, IL 60690-3587


Dear Mr. Cho:

Attached are (2) two copies of Refined Metals, Beech Grove, Indiana Revision No. 1 of the Part B Application. Refined Metals has modified the original Part B submitted pertaining to recent changes of the facility. Revision No. 1 should supersede all previous submittals.

Six (6) copies of Revision No. 1 of the Part B Application have been submitted to the Indiana Department of Environmental Management for their review.

If you have any questions concerning Revision 1, please contact me or Jeff Pierce of Lake Engineering, Inc. at (404)-257-9634.

Sincerely,


T. William Freuniger
Vice President

TWF:mhm

Attachments

250.4.5

RECEIVED
MAR 21 1989
OFFICE OF RCRA
Waste Management Division
U.S. EPA, REGION V

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CERTIFICATION

I certify under penalty of law that I have personally examined and am familiar with the information submitted in this document and all attachments and that, based on my inquiry of those individuals immediately responsible for obtaining the information, I believe that the information is true, accurate and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment.

Date: _____

Signature: _____

T. William Freudiger
Vice President

FORM 1 GENERAL	U.S. ENVIRONMENTAL PROTECTION AGENCY GENERAL INFORMATION <i>Consolidated Permits Program</i> <i>(Read the "General Instructions" before starting.)</i>	I. EPA I.D. NUMBER <div style="border: 1px solid black; padding: 2px;"> F I N D 0 0 0 7 1 8 1 3 0 </div>																																																						
II. POLLUTANT CHARACTERISTICS <p>INSTRUCTIONS: Complete A through J to determine whether you need to submit any permit application forms to the EPA. If you answer "yes" to any questions, you must submit this form and the supplemental form listed in the parenthesis following the question. Mark "X" in the box in the third column. If the supplemental form is attached. If you answer "no" to each question, you need not submit any of these forms. You may answer "no" if your activity is excluded from permit requirements; see Section C of the instructions. See also, Section D of the instructions for definitions of bold-faced terms.</p> <table border="1" style="width:100%; border-collapse: collapse;"> <thead> <tr> <th rowspan="2">SPECIFIC QUESTIONS</th> <th colspan="3">MARK "X"</th> <th rowspan="2">SPECIFIC QUESTIONS</th> <th colspan="3">MARK "X"</th> </tr> <tr> <th>YES</th> <th>NO</th> <th>FORM ATTACHED</th> <th>YES</th> <th>NO</th> <th>FORM ATTACHED</th> </tr> </thead> <tbody> <tr> <td>A. Is this facility a publicly owned treatment works which results in a discharge to waters of the U.S.? (FORM 2A)</td> <td></td> <td>X</td> <td></td> <td>B. Does or will this facility (either existing or proposed) include a concentrated animal feeding operation or aquatic animal production facility which results in a discharge to waters of the U.S.? (FORM 2B)</td> <td></td> <td>X</td> <td></td> </tr> <tr> <td>C. Is this a facility which currently results in discharges to waters of the U.S. other than those described in A or B above? (FORM 2C)</td> <td>X</td> <td></td> <td></td> <td>D. Is this a proposed facility (other than those described in A or B above) which will result in a discharge to waters of the U.S.? (FORM 2D)</td> <td></td> <td>X</td> <td></td> </tr> <tr> <td>E. Does or will this facility treat, store, or dispose of hazardous wastes? (FORM 3)</td> <td>X</td> <td></td> <td>X</td> <td>F. Do you or will you inject at this facility industrial or municipal effluent below the lowermost stratum containing, within one quarter mile of the well bore, underground sources of drinking water? (FORM 4)</td> <td></td> <td>X</td> <td></td> </tr> <tr> <td>G. Do you or will you inject at this facility any produced water or other fluids which are brought to the surface in connection with conventional oil or natural gas production; inject fluids used for enhanced recovery of oil or natural gas, or inject fluids for storage of liquid hydrocarbons? (FORM 4)</td> <td></td> <td>X</td> <td></td> <td>H. Do you or will you inject at this facility fluids for special processes such as mining of sulfur by the Frasch process, solution mining of minerals, in situ combustion of fossil fuel, or recovery of geothermal energy? (FORM 4)</td> <td></td> <td>X</td> <td></td> </tr> <tr> <td>I. 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Refer to the instructions for detailed item descriptions and for the legal authorizations under which this data is collected.</p>
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III. NAME OF FACILITY <div style="border: 1px solid black; padding: 2px;"> REFINED METALS CORP </div>											
IV. FACILITY CONTACT <table border="1" style="width:100%; border-collapse: collapse;"> <tr> <td style="width:60%;">A. NAME & TITLE (last, first, & title)</td> <td style="width:40%;">B. PHONE (area code & no.)</td> </tr> <tr> <td>R. O. N. WIDENER PLANT MGR</td> <td>3 1 7 7 8 7 6 3 6 4</td> </tr> </table>				A. NAME & TITLE (last, first, & title)	B. PHONE (area code & no.)	R. O. N. WIDENER PLANT MGR	3 1 7 7 8 7 6 3 6 4				
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R. O. N. WIDENER PLANT MGR	3 1 7 7 8 7 6 3 6 4										
V. FACILITY MAILING ADDRESS <table border="1" style="width:100%; border-collapse: collapse;"> <tr> <td style="width:60%;">A. STREET OR P.O. BOX</td> <td style="width:40%;">B. CITY OR TOWN</td> </tr> <tr> <td>P O BOX 188</td> <td>BEECH GROVE</td> </tr> <tr> <td colspan="2">C. STATE D. ZIP CODE</td> </tr> <tr> <td colspan="2">I N 4 6 1 0 7</td> </tr> </table>				A. STREET OR P.O. BOX	B. CITY OR TOWN	P O BOX 188	BEECH GROVE	C. STATE D. ZIP CODE		I N 4 6 1 0 7	
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P O BOX 188	BEECH GROVE										
C. STATE D. ZIP CODE											
I N 4 6 1 0 7											
VI. FACILITY LOCATION <table border="1" style="width:100%; border-collapse: collapse;"> <tr> <td style="width:60%;">A. STREET, ROUTE NO. OR OTHER SPECIFIC IDENTIFIER</td> <td style="width:40%;">B. COUNTY NAME</td> </tr> <tr> <td>3700 SOUTH ARLINGTON AVE.</td> <td>MARION</td> </tr> <tr> <td>C. CITY OR TOWN</td> <td>D. STATE E. ZIP CODE F. COUNTY CODE (if known)</td> </tr> <tr> <td>BEECH GROVE</td> <td>I N 4 6 1 0 7</td> </tr> </table>				A. STREET, ROUTE NO. OR OTHER SPECIFIC IDENTIFIER	B. COUNTY NAME	3700 SOUTH ARLINGTON AVE.	MARION	C. CITY OR TOWN	D. STATE E. ZIP CODE F. COUNTY CODE (if known)	BEECH GROVE	I N 4 6 1 0 7
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C. CITY OR TOWN	D. STATE E. ZIP CODE F. COUNTY CODE (if known)										
BEECH GROVE	I N 4 6 1 0 7										

CONTINUED FROM THE FRONT

VII. SIC CODES (4-digit, in order of priority)

A. FIRST				B. SECOND			
7	3	3	4	1	(specify)	7	(specify)
Secondary Lead Smelting				NA			
C. THIRD				D. FOURTH			
7	(specify)	NA		7	(specify)	NA	

VIII. OPERATOR INFORMATION

A. NAME										B. Is the name listed in item VIII-A also the owner?									
REFINED METALS CORP										<input type="checkbox"/> YES <input type="checkbox"/> NO									
C. STATUS OF OPERATOR (Enter the appropriate letter into the answer box; if "Other", specify.)										D. PHONE (area code & no.)									
F = FEDERAL M = PUBLIC (other than federal or state) P = PRIVATE										A 3 1 7 7 8 7 6 3 6 4									
E. STREET OR P.O. BOX																			
P O BOX 188																			
F. CITY OR TOWN										G. STATE H. ZIP CODE									
BEECH GROVE										IN 4 6 1 0 7									
										IX. INDIAN LAND Is the facility located on Indian lands? <input type="checkbox"/> YES <input checked="" type="checkbox"/> NO									

X. EXISTING ENVIRONMENTAL PERMITS

A. NPDES (Discharges to Surface Water)										D. PSD (Air Emissions from Proposed Sources)									
9 N										9 P									
B. UIC (Underground Injection of Fluids)										E. OTHER (specify)									
9 U										STATE A Q P E R M I S (See Attachment 1)									
C. RCRA (Hazardous Wastes)										E. OTHER (specify)									
9 R										(specify)									

XI. MAP

Attach to this application a topographic map of the area extending to at least one mile beyond property boundaries. The map must show the outline of the facility, the location of each of its existing and proposed intake and discharge structures, each of its hazardous waste treatment, storage, or disposal facilities, and each well where it injects fluids underground. Include all springs, rivers and other surface water bodies in the map area. See instructions for precise requirements. (See Attachment 2)

XII. NATURE OF BUSINESS (provide a brief description)

Secondary Lead Smelting. The plant processes scrap metal and lead bearing raw materials into refined lead alloys.

XIII. CERTIFICATION (see Instructions)

I certify under penalty of law that I have personally examined and am familiar with the information submitted in this application and all attachments and that, based on my inquiry of those persons immediately responsible for obtaining the information contained in the application, I believe that the information is true, accurate and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment.

A. NAME & OFFICIAL TITLE (type or print)		B. SIGNATURE		C. DATE SIGNED	
T. William Freudiger Vice President				3-6-89	

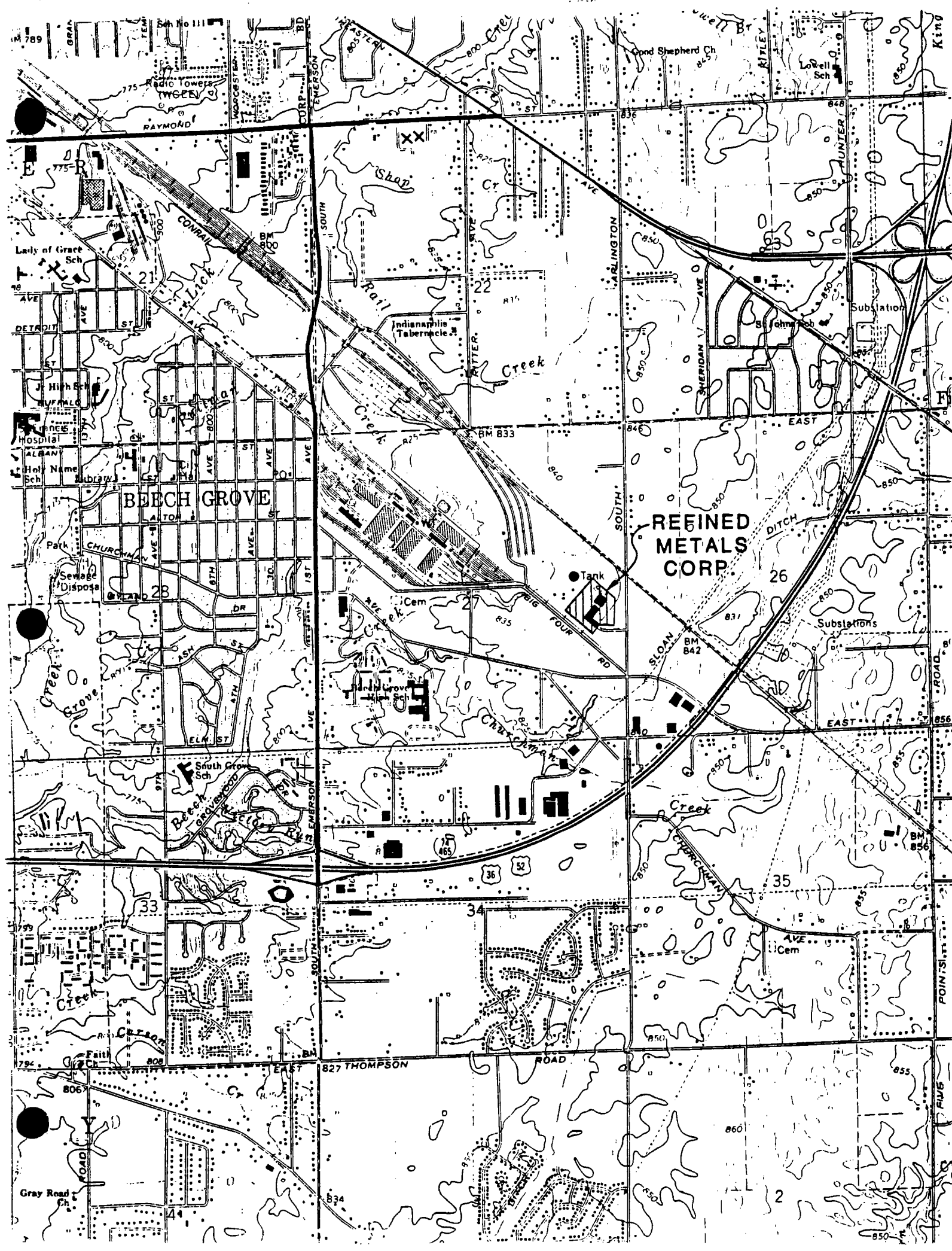
COMMENTS FOR OFFICIAL USE ONLY

C	
---	--

ATTACHMENT 1

STATE AIR QUALITY PERMITS

<u>Permit No.</u>	<u>Date Issued</u>	<u>Description</u>
08025	12-29-83	Blast Furnace (Cupola) with Baghouse Cyclone and Afterburner
08027	12-29-83	Sanitary Ventilation for Blast Furnace Slag Tap, Slag Cooling Area, Lead Well and Launder with Cyclone and Baghouse Dust Collectors
08028	12-29-83	Refinery Kettle No. 1
08029	12-29-83	Refinery Kettle No. 2
08030	12-29-83	Refinery Kettle No. 3
08031	12-29-83	Refinery Kettle No. 4
08032	12-29-83	Refinery Kettle No. 5
08033	12-29-83	Refinery Kettle No. 6
08034	12-29-83	Refinery Kettle No. 7



CONTINUE ON REVERSE

III. PROCESSES (continued)

C. SPACE FOR ADDITIONAL PROCESS CODES OR FOR DESCRIBING OTHER PROCESSES (code "T04"). FOR EACH PROCESS ENTERED HERE INCLUDE DESIGN CAPACITY.

NA

IV. DESCRIPTION OF HAZARDOUS WASTES

- A. EPA HAZARDOUS WASTE NUMBER** — Enter the four-digit number from 40 CFR, Subpart D for each listed hazardous waste you will handle. If you handle hazardous wastes which are not listed in 40 CFR, Subpart D, enter the four-digit number(s) from 40 CFR, Subpart C that describes the characteristics and/or the toxic contaminants of those hazardous wastes.
- B. ESTIMATED ANNUAL QUANTITY** — For each listed waste entered in column A estimate the quantity of that waste that will be handled on an annual basis. For each characteristic or toxic contaminant entered in column A estimate the total annual quantity of all the non-listed waste(s) that will be handled which possess that characteristic or contaminant.
- C. UNIT OF MEASURE** — For each quantity entered in column B enter the unit of measure code. Units of measure which must be used and the appropriate codes are:

ENGLISH UNIT OF MEASURE	CODE
POUNDS.....	P
TONS.....	T

METRIC UNIT OF MEASURE	CODE
KILOGRAMS.....	K
METRIC TONS.....	M

If facility records use any other unit of measure for quantity, the units of measure must be converted into one of the required units of measure taking into account the appropriate density or specific gravity of the waste.

D. PROCESSES**1. PROCESS CODES:**

For listed hazardous waste: For each listed hazardous waste entered in column A select the code(s) from the list of process codes contained in Item III to indicate how the waste will be stored, treated, and/or disposed of at the facility.

For non-listed hazardous wastes: For each characteristic or toxic contaminant entered in column A, select the code(s) from the list of process codes contained in Item III to indicate all the processes that will be used to store, treat, and/or dispose of all the non-listed hazardous wastes that possess that characteristic or toxic contaminant.

Note: Four spaces are provided for entering process codes. If more are needed: (1) Enter the first three as described above; (2) Enter "000" in the extreme right box of Item IV-D(1); and (3) Enter in the space provided on page 4, the line number and the additional code(s).

2. PROCESS DESCRIPTION: If a code is not listed for a process that will be used, describe the process in the space provided on the form.

NOTE: HAZARDOUS WASTES DESCRIBED BY MORE THAN ONE EPA HAZARDOUS WASTE NUMBER — Hazardous wastes that can be described by more than one EPA Hazardous Waste Number shall be described on the form as follows:

- Select one of the EPA Hazardous Waste Numbers and enter it in column A. On the same line complete columns B, C, and D by estimating the total annual quantity of the waste and describing all the processes to be used to treat, store, and/or dispose of the waste.
- In column A of the next line enter the other EPA Hazardous Waste Number that can be used to describe the waste. In column D(2) on that line enter "included with above" and make no other entries on that line.
- Repeat step 2 for each other EPA Hazardous Waste Number that can be used to describe the hazardous waste.

EXAMPLE FOR COMPLETING ITEM IV (shown in line numbers X-1, X-2, X-3, and X-4 below) — A facility will treat and dispose of an estimated 900 pounds per year of chrome shavings from leather tanning and finishing operation. In addition, the facility will treat and dispose of three non-listed wastes. Two wastes are corrosive only and there will be an estimated 200 pounds per year of each waste. The other waste is corrosive and ignitable and there will be an estimated 100 pounds per year of that waste. Treatment will be in an incinerator and disposal will be in a landfill.

LINE NO.	A. EPA HAZARDOUS WASTE NO. (enter code)				B. ESTIMATED ANNUAL QUANTITY OF WASTE	C. UNIT OF MEASURE (enter code)		D. PROCESSES									
	1. PROCESS CODES (enter)								2. PROCESS DESCRIPTION (if a code is not entered in D(1))								
X-1	K	0	5	4	900		P	T	0	3	D	8	0				
	D	0	0	2	400		P	T	0	3	D	8	0				
X-3	D	0	0	1	100		P	T	0	3	D	8	0				
X-4	D	0	0	2													included with above

EPA I.D. NUMBER (enter from page 1)													FOR OFFICIAL USE ONLY														
W I N D 0 0 0 7 1 8 1 3 0 1													W 2 DUP														
DESCRIPTION OF HAZARDOUS WASTES (continued)																											
WASTE NO.	A. EPA HAZARD. WASTE NO. (enter code)	B. ESTIMATED ANNUAL QUANTITY OF WASTE	C. UNIT OF MEASURE (enter code)	D. PROCESSES																							
				1. PROCESS CODES (enter)												2. PROCESS DESCRIPTION (if a code is not entered in D(1))											
23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41	42	43	44	45	46	47	48	49	50
1	D 0 0 2	1600*	T	S 0 3																							
2	D 0 0 8																										
3																											
4																											
5																											
6																											
7																											
8		* Quantity shown represents the maximum quantity in storage at any one time.																									
9																											
10																											
11																											
12																											
13																											
14																											
15																											
16																											
17																											
18																											
19																											
20																											
21																											
22																											
23																											
24																											
25																											
26																											

IV. DESCRIPTION OF HAZARDOUS WASTES (continued)

E. USE THIS SPACE TO LIST ADDITIONAL PROCESS CODES FROM ITEM D(1) ON PAGE 3.

NA

EPA I.D. NO. (enter from page 1)

F	I	N	D	0	0	0	7	1	8	1	3	0	6
---	---	---	---	---	---	---	---	---	---	---	---	---	---

V. FACILITY DRAWING

All existing facilities must include in the space provided on page 5 a scale drawing of the facility (see instructions for more detail). (See attachment 3)

VI. PHOTOGRAPHS

All existing facilities must include photographs (aerial or ground-level) that clearly delineate all existing structures; existing storage, treatment and disposal areas; and sites of future storage, treatment or disposal areas (see instructions for more detail).

FACILITY GEOGRAPHIC LOCATION

LATITUDE (degrees, minutes, & seconds)

LONGITUDE (degrees, minutes, & seconds)

VIII. FACILITY OWNER

☐ A. If the facility owner is also the facility operator as listed in Section VIII on Form 1, "General Information", place an "X" in the box to the left and skip to Section IX below.

B. If the facility owner is not the facility operator as listed in Section VIII on Form 1, complete the following items:

1. NAME OF FACILITY'S LEGAL OWNER

2. PHONE NO. (area code & no.)

E	Refined Metals Corp.,	Lee Swain, President
---	-----------------------	----------------------

9	0	1	-	7	7	5	-	3	7	7	0
---	---	---	---	---	---	---	---	---	---	---	---

3. STREET OR P.O. BOX

4. CITY OR TOWN

5. ST.

6. ZIP CODE

F	P. O. Box 9006
---	----------------

G	Memphis
---	---------

T	N
---	---

3	8	1	0	9
---	---	---	---	---

IX. OWNER CERTIFICATION

I certify under penalty of law that I have personally examined and am familiar with the information submitted in this and all attached documents, and that based on my inquiry of those individuals immediately responsible for obtaining the information, I believe that the submitted information is true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment.

A. NAME (print or type)

B. SIGNATURE

C. DATE SIGNED

T. William Freudiger
Vice President



3-6-89

X. OPERATOR CERTIFICATION

I certify under penalty of law that I have personally examined and am familiar with the information submitted in this and all attached documents, and that based on my inquiry of those individuals immediately responsible for obtaining the information, I believe that the submitted information is true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment.

A. NAME (print or type)

B. SIGNATURE

C. DATE SIGNED

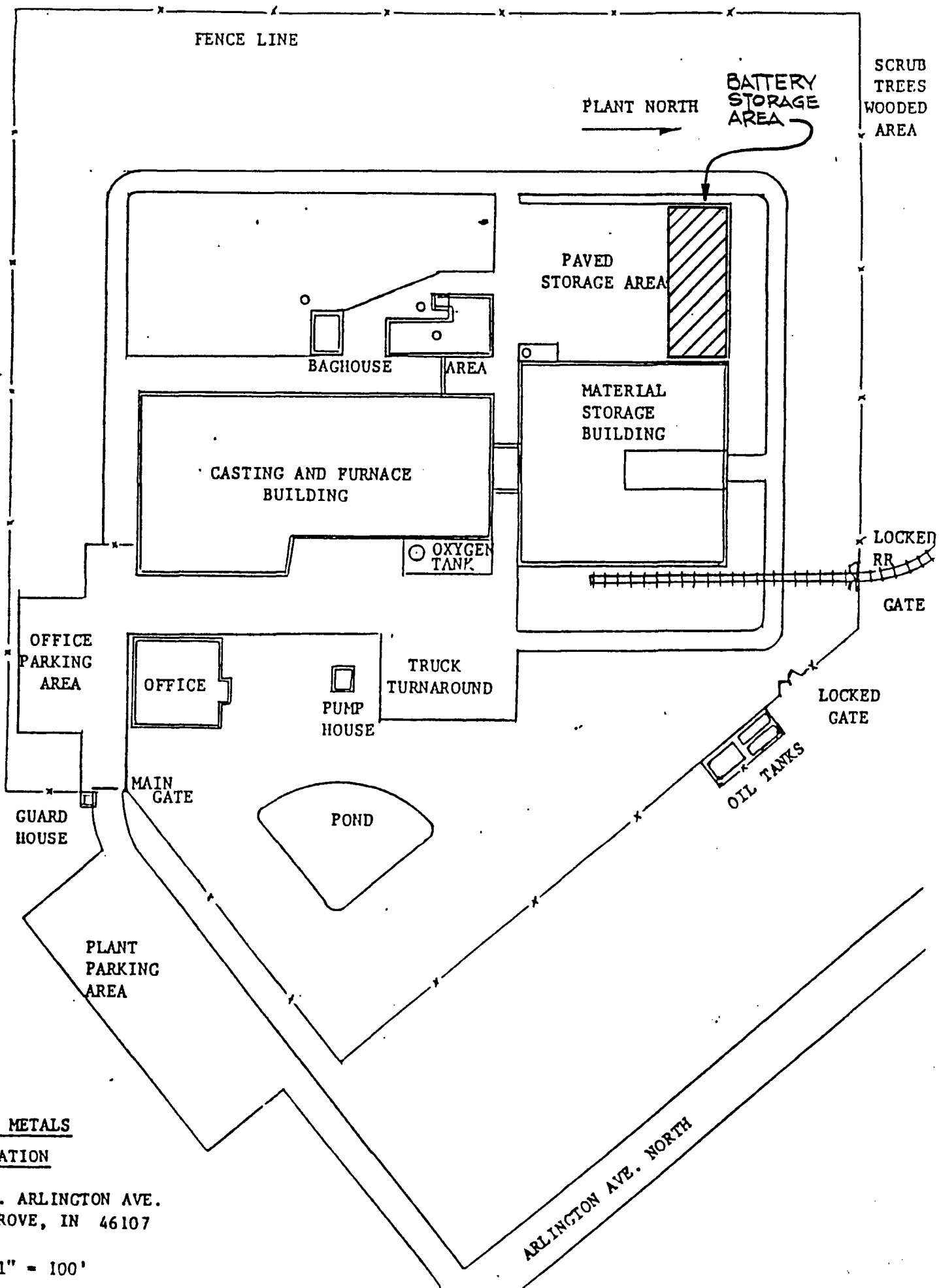
NA

NA

NA

V. FACILITY DRAWING (see page 4)

(See Attachment 3)



REFINED METALS

CORPORATION

3700 S. ARLINGTON AVE.
BEECH GROVE, IN 46107

SCALE 1" = 100'

SECTION 2

FACILITY DESCRIPTION

This section provides a general description of the Refined Metals Corporation, Beech Grove secondary lead smelter facility as required by 40 CFR 270.14(b)(1) of the Federal Register.

2.1 GENERAL DESCRIPTION [320 IAC 4.1-34-5(b)(1)]

Refined Metals Corporation Beech Grove facility (Figure 2-1) is located in the southeastern section of Beech Grove, Indiana in Marion County. The facility is located north of Big Four Road on South Arlington Avenue. The street address is:

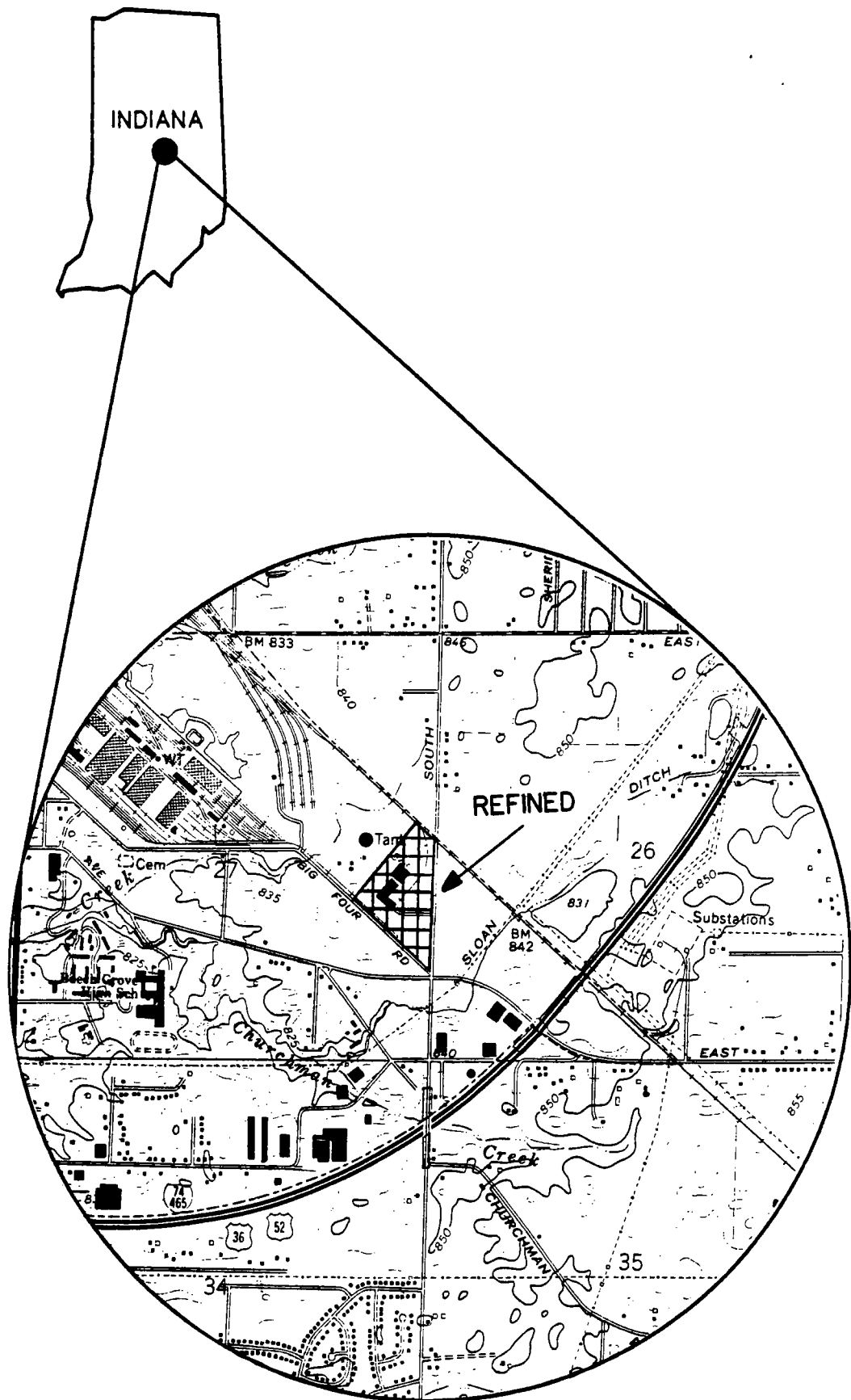
Refined Metals Corporation
3700 S. Arlington Avenue
Beech Grove, IN 46107

The contact responsible for the plant operations activities at the facility is:

Ronald Widner
Plant Manager

The facility is a manufacturer of refined lead alloys through the smelting and refining of lead-bearing scrap materials. The process is commonly referred to as secondary lead smelting and refining.

The primary raw material used for this process is spent lead acid batteries. Automotive and industrial batteries account for approximately 80 percent of the raw material processed. The remaining 20 percent consists of other lead bearing materials



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8000 LAKE FOREST DR. SUITE 260
ATLANTA, GEORGIA 30328

REFINED METALS CORP.
BEECH GROVE, IN

SITE LOCATION

FIGURE
2-1

such as plant scrap, battery plates and miscellaneous metals.

A current process flow diagram of materials at the facility is shown in Figure 2-2.

2.2 TOPOGRAPHIC MAP [320 IAC 4.1-34-5(b)(19)]

The topographic map for the facility is shown in Figure 2-3. The map is shown at a scale of one inch equals 100 feet with one foot contour intervals.

2.2.1 Zoning/Surrounding Land Uses

The facility area and surrounding property are zoned for the land uses as shown on Figure 2-4. The facility is zoned heavy industrial suburban district. The adjacent properties are zoned medium and heavy industrial suburban or agricultural district, within a mile radius of the facility, the zoning includes neighborhood commercial, community-regional commercial, special commercial, single and multi-family, low and medium density districts.

2.2.2 Injection/Withdrawal Wells

There are no known injection/withdrawal wells within 1000 feet of the plant boundary. Water is supplied by the Beech Grove City water main surrounding the plant.

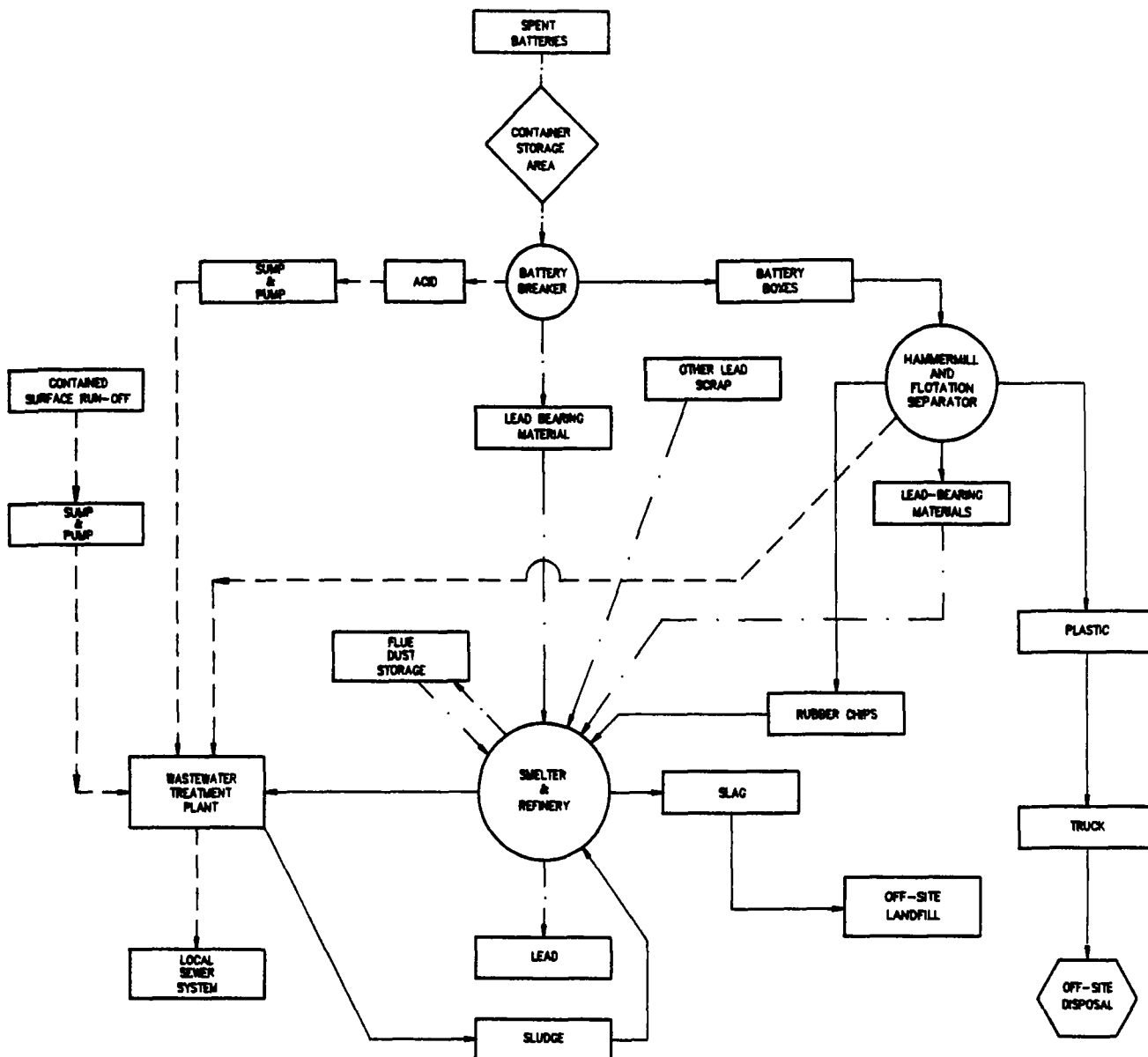
2.2.3 Process/Surface Run-off/Sanitary

The facility's sewer transports wastewater and surface run-off. Figure 2-5 shows the sanitary layouts.

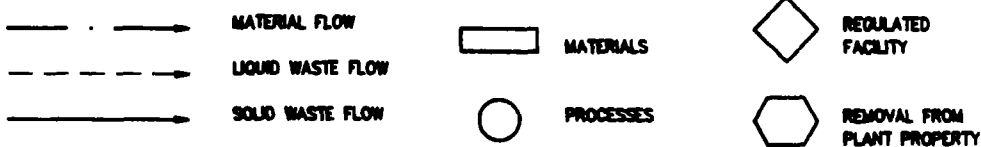
Lead near municipal
wells
Humm?

Solubility of
Pb under likely
GW conditions

Where is site
hydrogeo?



LEGEND



255-009

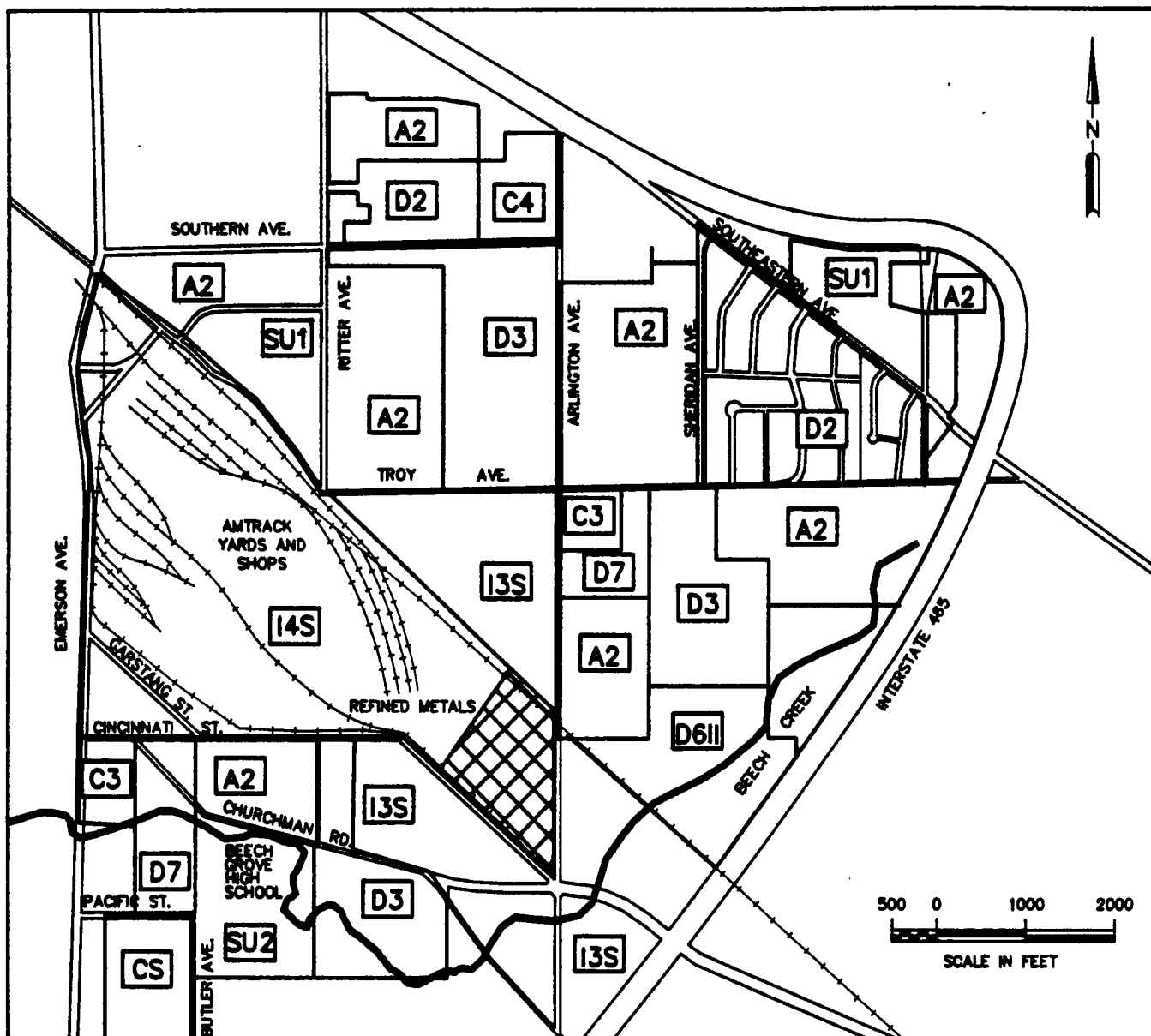


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REFINED METALS CORP.
BEECH GROVE, INDIANA

PROCESS FLOW
DIAGRAM

FIGURE
2-2



LEGEND

- A2 AGRICULTURAL DISTRICT
- C3 NEIGHBORHOOD COMMERCIAL DISTRICT
- C4 COMMUNITY-REGIONAL COMMERCIAL DISTRICT
- CS SPECIAL COMMERCIAL DISTRICT
- D2 SINGLE-FAMILY - LOW DENSITY
- D3 SINGLE-FAMILY - MEDIUM/HIGH DENSITY
- D6II MULTI-FAMILY - LOW DENSITY
- D7 MULTI-FAMILY - MEDIUM DENSITY
- I3S MEDIUM INDUSTRIAL SUBURBAN DISTRICT
- I4S HEAVY INDUSTRIAL SUBURBAN DISTRICT
- SU1 CHURCHES
- SU2 SCHOOLS

255-022

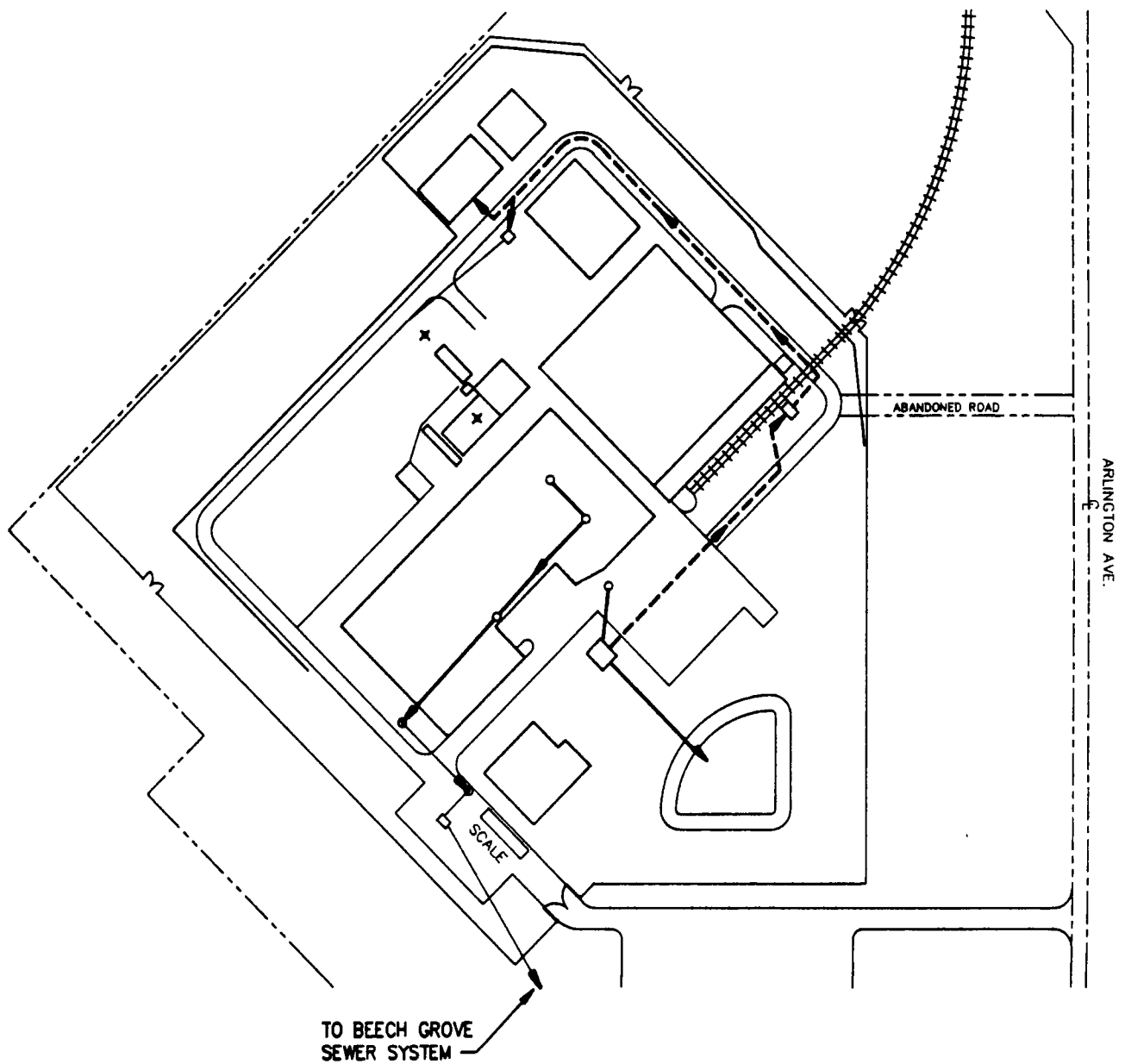


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REFINED METALS CORP.
BEECH GROVE, INDIANA

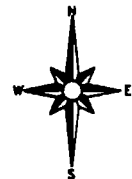
ZONING
MAP

FIGURE
2-4



LEGEND

FLOW PATH ———→ (CURRENT)
 FLOW PATH - - - - -→ (FUTURE)
 MANHOLE ○



100 50 0 100 200
 SCALE IN FEET

255-012



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REFINED METALS CORP.
 BEECH GROVE, INDIANA

SEWER
 SYSTEM

FIGURE
 2-5

The sewer collects and transports process wastewater and the plant wash down. Drains and underground pipes make up the sewer system located within the casting and refining building. The wastewater is then discharged to the City of Beech Grove municipal sewer system.

The same sewer system collects sanitary wastewater from the main office, the employee's break and washroom, and the casting and furnace building. The wastewater is collected through underground pipes which discharge on the eastern part of the facility into the City of Beech Grove municipal sewer system.

The facility is currently constructing a wastewater treatment plant to handle the treatment of surface water run-off and battery acid. The construction will also include two pump houses to handle the collection and transportation of wastewater to the treatment plant. Construction is estimated to be completed in December 1989.

Additional manholes have been installed to collect stormwater run-off. These sumps are strategically located within the paved surface area to allow for proper drainage and collection. One sump located east of the casting and furnace building collects surface run-off, is piped and pumped into the on-site concrete bottomed surface impoundment.

2.3 LOCATION INFORMATION

2.3.1 Seismic Standards

Because this is an existing rather than a new facility, the seismic standard does not apply. In addition, the State of Indiana does not appear in Appendix VI of 40 CFR Part 264 §264.18(a)

regarding political jurisdictions in which compliance must be demonstrated.

2.3.2 Floodplain Standards [320 IAC 4.1-34-5(b)(11)(iii)]

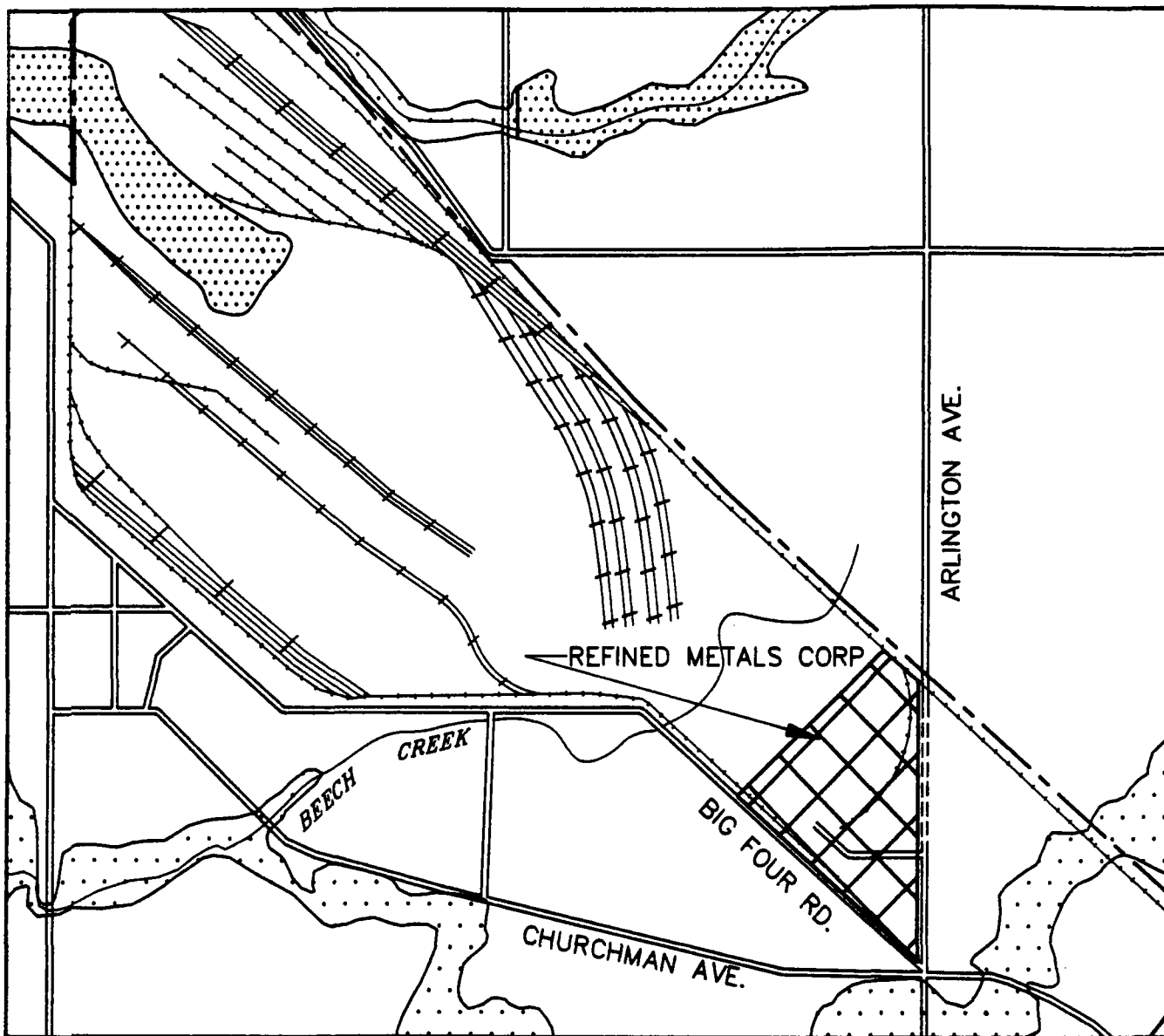
This facility is not located within a floodplain. A digitized floodplain insurance map is shown on Figure 2-6.

2.4 TRAFFIC PATTERNS [320 IAC 4.1-34-5(b)(10)]

Access to the facility is from South Arlington Avenue. Traffic patterns for incoming and outgoing material are shown in Figure 2-7 and Figure 2-8, respectively. The layout is designed for raw material and product in trucks to move in a one way traffic pattern through the scale, to the battery decasing area and back through the scale before leaving.

Employee parking is mainly confined to a parking area adjacent to the guard station and outside the fenced entrance. There is a small lot adjacent to the main office, inside the fenced area, used for parking. One lot is south and the other is southeast of the office. The two lots can accommodate a total of 40 cars of which 30 spaces are in the main parking area adjacent to the guard station.

Within the facility, most traffic consists of front-end loaders (3), forklifts (5), yard tractor-trailers (3), sweeper (1) and small trucks. The front-end loaders and the forklifts are used as part of the production operation. Approximately 15 trucks enter and leave the site each day.



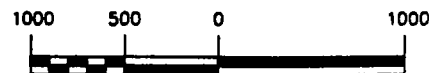
LEGEND



100 YEAR FLOOD BOUNDARY



500 YEAR FLOOD BOUNDARY



APPROXIMATE SCALE IN FEET

255-023

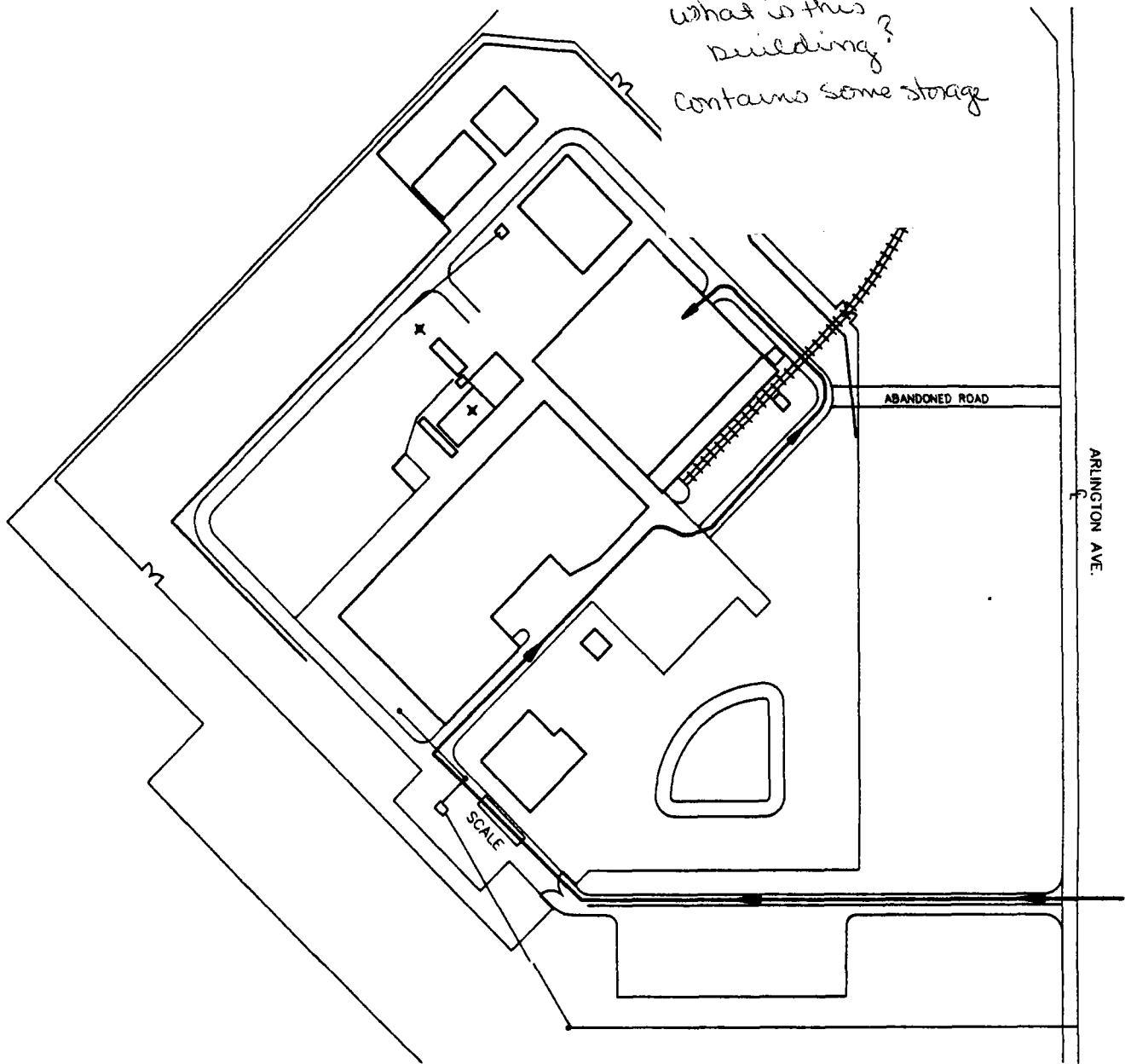


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BEECH GROVE, INDIANA

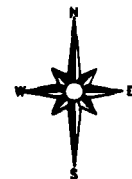
100 YEAR
FLOOD PLAN

FIGURE
2-6



LEGEND

—→ FLOW PATTERN



100 50 0 100 200

SCALE IN FEET

255-005

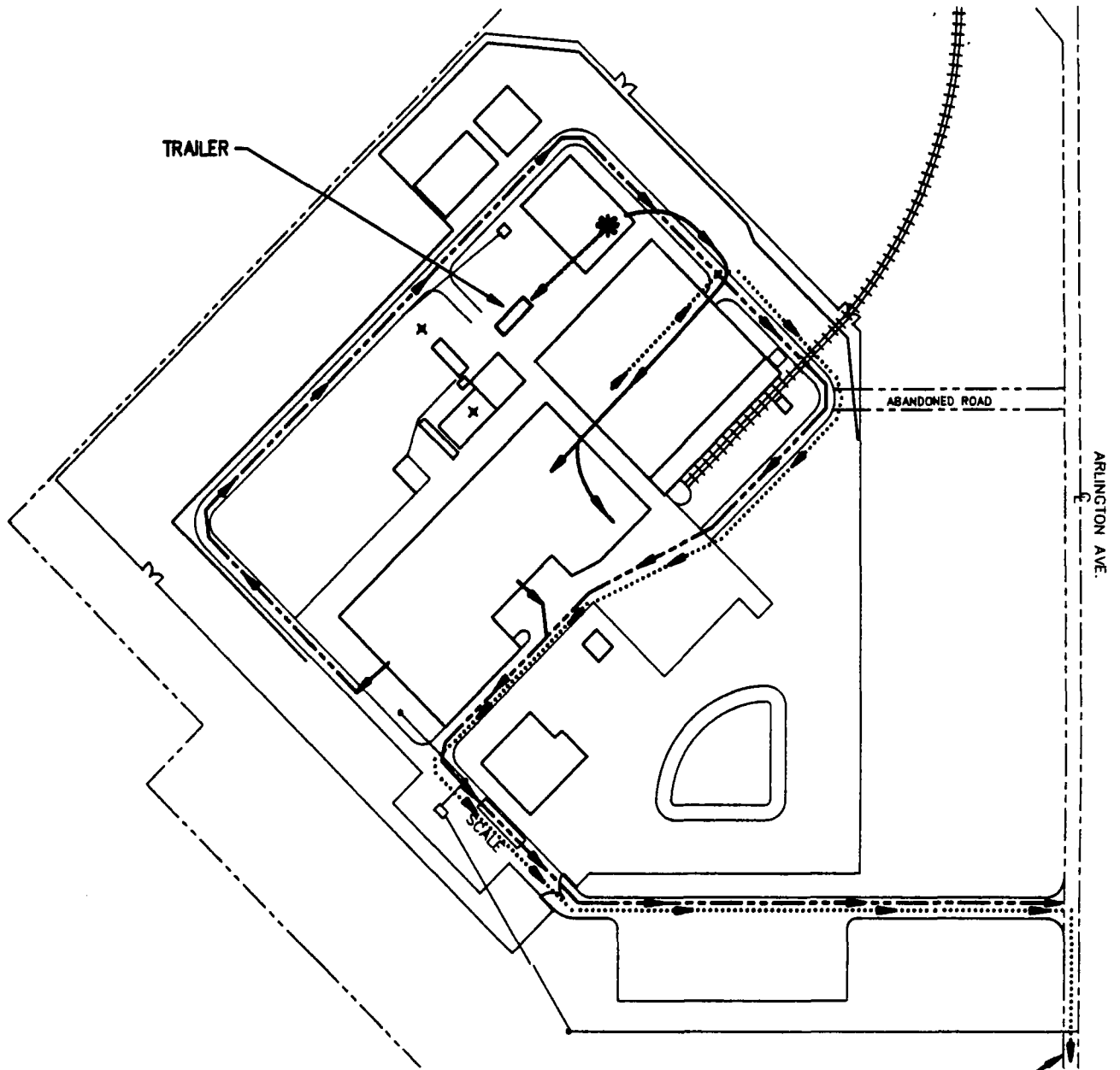


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ATLANTA, GEORGIA 30328

REFINED METALS CORP.
BEECH GROVE, INDIANA

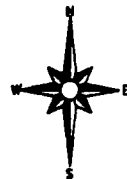
INCOMING
MATERIAL

FIGURE
2-7



LEGEND

- RUBBER —————>
- PLASTIC —————>
- SLAG>
- LEAD - - - - ->



100 50 0 100 200
SCALE IN FEET

255-010



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ATLANTA, GEORGIA 30328

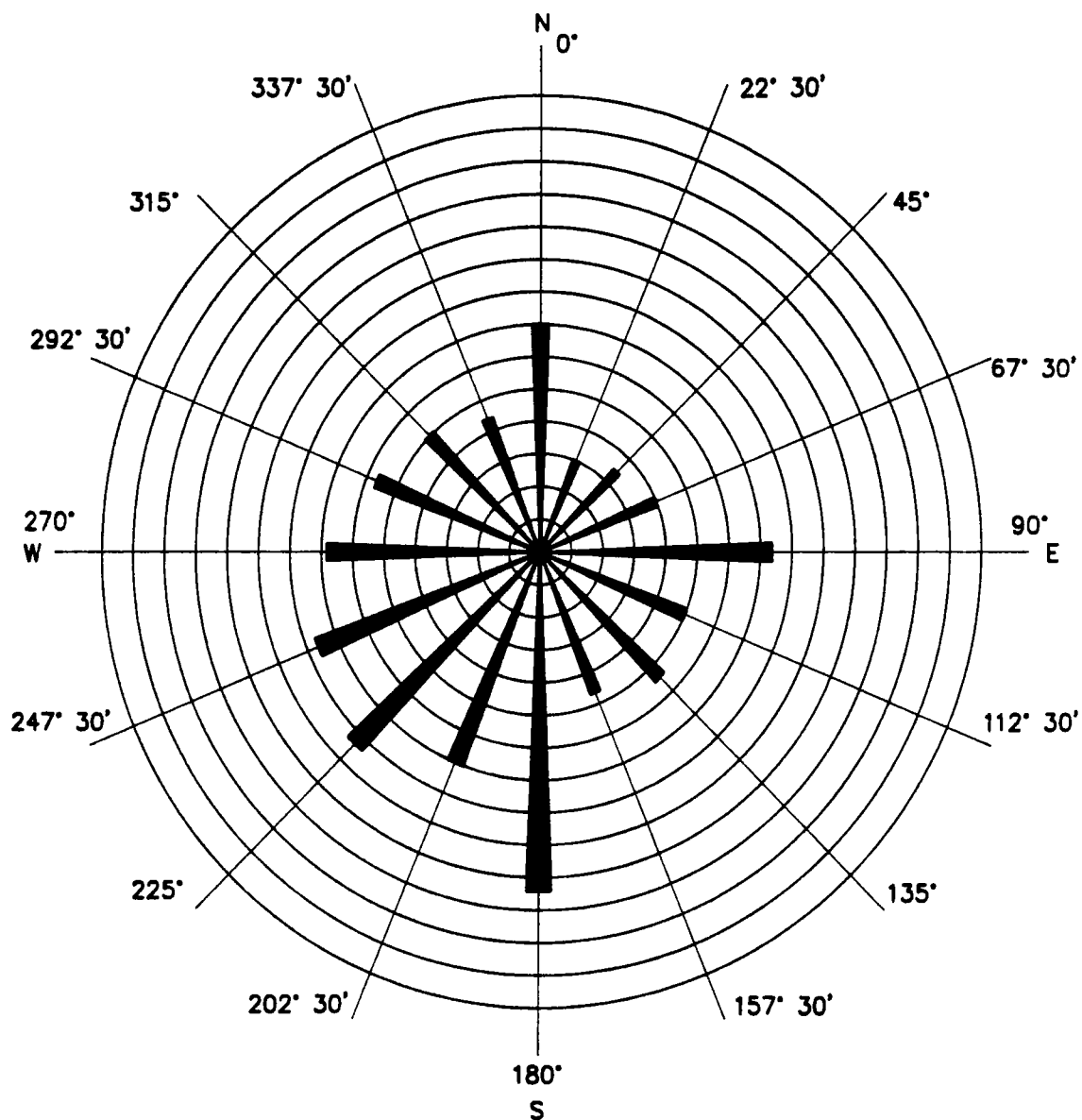
REFINED METALS CORP.
BEECH GROVE, INDIANA

OUTGOING
MATERIAL

FIGURE
2-8

2.5 WIND ROSE [320 IAC 4-1-51-5(b)(2)]

A wind rose for Beech Grove, Indiana is shown in Figure 2-9. While there are some seasonal as well as year to year variations, this wind rose is considered representative of typical wind patterns in the area.



255-020



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BEECH GROVE, INDIANA

WIND ROSE

FIGURE
2-9

SECTION 4

PROCESS INFORMATION

The information in this section is submitted in accordance with the requirements of 40 CFR 270.15, 270.16, 270.17, 270.18 and 270.21. Other regulations addressed to complete this section are included in 40 CFR 264 Subpart L.

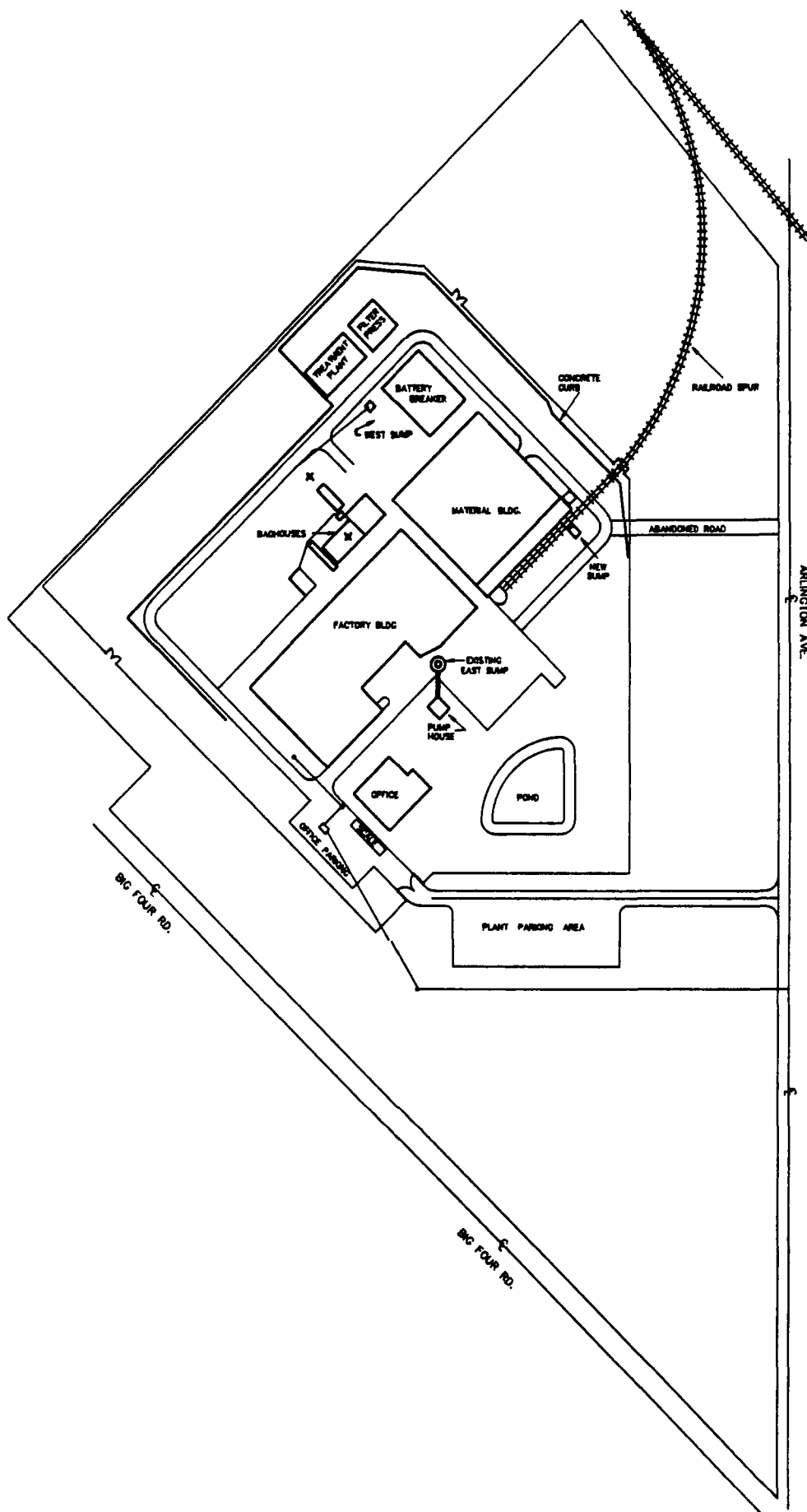
This section discusses process information for the secondary lead smelting. The unit of concern for the Part B application is the container storage area. The container storage areas encompasses approximately 2.3 acres. The facility process layout is shown in Figure 4-1.

4.1 Process

The facility purchases spent lead-acid batteries and reclaims the lead bearing materials, known as plates or groups, from the batteries. Plates are defined as the grid metals, lead oxide, and lead sulfur salts. The batteries are temporarily stored in the container storage parking lots in tractor trailer trucks or on pallets. The batteries are retrieved from the container storage areas as needed to keep the process flowing.

The process begins with the sawing off the tops of the batteries. This is accomplished by using a conveyor-fed vertical saw. The conveyor sends the batteries through the saws where the tops are removed. The acid is collected in a stainless steel sump and routed to the acid treatment system. The battery casing and its contents are tumbled and the plates and groups are dumped

↑
through what?



255-004



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8000 LAKE FOREST DR. SUITE 350
ATLANTA, GEORGIA 30328

REFINED METALS CORP.
BEECH GROVE, INDIANA

FACILITY
DESCRIPTION

FIGURE
4-1

into storage bins. They are transported and temporarily stored with other lead-bearing material in the material storage building before being fed into the blast furnace. The furnace is used to reduce the material to elemental lead.

The tops removed during sawing are added to the plastic cases and crushed. They are separated into three fractions (plastics, rubber, and lead-bearing material) by "sink-float" separators. The plastics are placed into trailers for off-site resource recovery. The rubber is fed into the furnace where the lead is recovered. After recovery the lead is refined and alloyed.

4.2 Tanks

The facility does not treat, store, or dispose of hazardous waste in tanks other than those tanks which will be part of the wastewater treatment process which are exempt from RCRA permitting requirements by 40 CFR 264.1(G)(6). A description of these tanks are included below for informational purposes.

Currently, there are 5 tanks at the facility used as part of the wastewater treatment process. A list of the tanks is shown in Table 4-1. The tanks will be used for neutralization and collection, flocculation, and holding.

"used..." ↗

"...tanks" ↗

will be used..."
?? Are they up
or not?

TABLE 4-1

ON-SITE WASTEWATER TREATMENT TANKS

TYPE	SIZE	TANK FUNCTION

Wastewater Treatment System:		
Storage Tank	11,500 gal.	Equalization/Collection Tank
Storage Tank	11,500 gal.	Equalization/Collection Tank
Clean Water Tank	6,000 gal.	Clean Water Storage Tank
Flocculation Tank	4,300 gal.	Flocculation Tank
1st pH Tank	4,000 gal.	pH Neutralization Tank
2nd pH Tank	4,000 gal.	pH Neutralization Tank

4.3 Container Storage Areas [320 IAC 4.1-48-4]

The container storage areas are a storage area that stores containerized waste that include whole batteries prior to the decasing process, lead bearing material and manifested hazardous waste. The batteries are received at the facility in tractor trailer trucks and are stored inside the trailers or on pallets on concrete until they are needed for processing. The batteries inside the truck are protected from the elements. The lead bearing material and the manifested hazardous waste are stored in 55 gallon drums.

The parking lot area where the trailers are stored is constructed of 6 inches of concrete overlying compacted soil. Run-off from the area is directed to a collection sump where it will be pumped to the wastewater treatment plant.

analysis?

SECTION 5

GROUNDWATER MONITORING

The information in this section is submitted in accordance with the requirements of 40 CFR 264-Subpart F and 320 IAC 4.1-34-5(c)]. Prior to November 8, 1988, compliance groundwater monitoring was not required at the facility. Currently, no groundwater monitoring wells have been installed.

SECTION 6

HAZARD PREVENTION

The information provided in this section is submitted in accordance with the requirements of 40 CFR 270.14(b)(4), (5), (6), (8), and (9). Other regulations addressed to complete this section include 40 CFR 264.14 and 264.15.

6.1 SECURITY [320 IAC 4.1-41-5, 4.1-35-5(b)(1 and 4)]

The general security provisions provided by the facility are fencing, gates, signs, and a security guard; unauthorized entry is thoroughly restricted. All visitors and contractors entering the plant are required to log in and out at the gate.

6.1.1 Barriers [320 IAC 4.1-41-5(b)(2)(i)]

The facility is surrounded by a ten foot high chain-linked fence on all four sides. The facility has three gates two of which are always locked. The other gate is the facility entrance which is guarded by security.

6.1.2 Means To Control Entry [320 IAC 4.1-41-5(b)(2)(ii)]

The facility provides a security guard during the regular five day work week. The guard is a facility employee with a schedule from 7:00 a.m. until 3:30 p.m. The guard monitors the main entrance during the scheduled hours. During the other hours, the facility gate is locked to prevent unauthorized entry.

6.1.3 Warning Signs [320 IAC 4.1-41-5(c)]

Signs which are legible from a distance of 25 feet are posted around the facility on the gate entrance. The signs are visible from all angles of approach and bear the legend "Unauthorized

Personnel Keep Out". The sign is located on the front gate located at the entrance of the facility. The other gate is constantly locked and requires no signs.

6.2 INSPECTION SCHEDULE [320 IAC 4.1-41-5, 4.1-34-5(b)(5)]

6.2.1 General Inspection Requirements [320 IAC 4.1-34-5(b)(5), 4.1-41-6(a) and (b), 4.1-42-4]

In order to minimize the potential for malfunctions, operating errors, deterioration, and discharges which may lead to releases of hazardous wastes to the environment, the regulations require the development and implementation of a written inspection schedule. Table 6-1 is an inspection schedule for all monitoring equipment, safety and emergency equipment, security devices, and operating and structural equipment at the facility which are important in protecting against such incidents.

The frequency of inspection for each item in Table 6-1 is based on the rate of possible deterioration of the equipment and probability of an environmental or human health incident if the problem is not detected between inspections. Areas subject to spillage of hazardous wastes will be inspected each operating day. The inspection schedule includes the following:

Container Storage Areas

The inspection log form shown in Figure 6-1 will be used in conducting the inspections and recording all observations, repairs, and remedial actions. The log will be kept for a minimum of three years following the respective inspections. At

TABLE 6-1

REGULATED WASTE FACILITY INSPECTION SCHEDULE

Item/Area	Frequency	Inspect for
<u>Safety and Emergency Equipment</u>		
Telephones	Monthly	Access; operation
Fire Extinguishers	Monthly	Location; access; operation; chemical level.
Medical Kits	Monthly	Location; access; inventory; instructions.
Emergency Eyewash and Showers	Monthly	Access; location; operation.
Caustic Soda or Soda Ash	Monthly	Access; location; quantity.
<u>General Equipment</u>		
Signs	Semi-annually	Location; visibility; structural support.
Fence	Quarterly	Structural support; defects; unintended access.
Sumps	Quarterly	Structural integrity; screens; operation.
Sump Pumps	Quarterly	Operation; power; on/off mechanism.
Gates	Quarterly	Structural integrity; locks; chains; unintended access.
<u>Regulated Unit</u>		
Container Storage Areas	Daily*	Structural integrity; cracks; leaking batteries.

* Daily - during days of operation

REFINED METALS CORPORATION
REGULATED WASTE MANAGEMENT

OPERATING AND STRUCTURAL EQUIPMENT INSPECTION LOG

MONTH _____

DAILY

YEAR _____

DAY	BATTERIES ON PALLETS	BATTERIES LEAKING	CRACKS IN CONTAINER	CRACKS IN CONTAINER AREA SURFACE	INITIALS	COMMENTS
1						
2						
3						
4						
5						
6						
7						
8						
9						
10						
11						
12						
13						
14						
15						
16						
17						
18						
19						
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23						
24						
25						
26						
27						
28						
29						
30						
31						

* NOTE HOLIDAYS AND WEEKENDS

255-019



LAKE ENGINEERING, INCORPORATED
8000 LAKE FORREST DR. SUITE 360
ATLANTA, GEORGIA 30328

REFINED METALS CORPORATION
BEECH GROVE, INDIANA

DAILY
INSPECTION LOG

FIGURE
6-1

a minimum the logs will include the following:

- Date and time of the inspection;
- Name of the inspector;
- Notation of observations made; and
- Date and nature of any repairs or remedial actions

Any malfunction, operating error, deterioration, or discharge discovered during an inspection will be noted on the inspection log. These problems will be corrected on a schedule that prevents the problem from becoming an environmental or health hazard. Immediate action will be taken when such a hazard is imminent or occurring.

**6.2.2 Specific Process Inspection Requirements [320 IAC 4.1-41-6
(b) (4), 4.1-48-5]**

The container storage areas shall be inspected weekly for the following items:

- o Proper storage of batteries on pallets
- o Batteries leaking
- o Cracks in containers
- o Cracks in container storage area surface

6.2.3 Remedial Action

If inspection reveals that non-emergency maintenance is needed, it will be completed as soon as possible to preclude further damage and reduce the need for emergency repairs. If a hazard is imminent or has already occurred during the course of an inspection or any time between inspections, remedial actions will be taken immediately. Facility personnel will notify the appropriate authorities per the Contingency Plan (Section 7), if appropriate, and initiate remedial actions. In the event of an

emergency involving the minor release of hazardous constituents to the environment, efforts will be directed towards containing the hazard, removing it, and subsequently decontaminating the affected area.

In case of an emergency where containers rupture and cause spillage, the following actions will be taken:

1. The ruptured container will be removed from the container storage area and placed in a 55 gallon drum.
2. The battery acid will be contained by constructing a soil berm to prevent run-off of acid from the immediate area. Shovels shall be used to distribute soil for berm construction. A front-end loader can also be used for larger spills if required.
3. Steps will be take to neutralize the acid to a pH of 6.0 and 9.0. The acid will be neutralized by using caustic soda or soda ash. Located in the casting building. The neutralizer shall be transported to the spill in buckets and the neutralize spread over the spill in sufficient quantities to absorb the acid.
4. The neutralized acid, soda ash or caustic soda, and the soil berm will then be recycled through the furnace to remove any lead that has dissolved in the acid. The neutralized material should be removed from the surface using either a shovel or front end loader and transported to the furnace in either a 55 gallon drum or the front end loader. The surface where the spill occurred shall be cleaned sufficiently to remove all residue. The water should be directed to the sump to allow for proper treatment of the water by the on-site wastewater treatment plant.
5. The leaking container placed in the 55 gallon drum will be recycled. The 55 gallon drum shall be transported to the furnace using a front end loader or forklift.

The remedial action will assure that contamination from the containers stored in the container storage areas will not migrate off-site.

6.2.4 Inspection Log

An inspection log will be maintained for each calendar year. The inspection log notebook will always be kept with the inspection schedule in the main office. As required, records of inspections will be kept for at least three years from the date of inspection. Copies of the inspection logs are shown in Figure 6-2 and Figure 6-3.

6.3 EQUIPMENT REQUIREMENTS [320 IAC 4.1-34-5(b), 4.142.3]

6.3.1 Internal Communication [320 IAC 4.1-42-3(a)]

Internal communication at the facility is provided. Phones are located in the main office, maintenance building, employee locker room and the front gate house.

6.3.2 External Communication [320 IAC 4.1-42-3(b)]

The same phone system used for internal communication is used for external communication.

6.3.3 Emergency Equipment [320 IAC 4.1-42-3(c)]

The facility maintains fire protection equipment which is maintained by a private firm. All employees are trained in the proper procedures for using the equipment. The facility has in place procedures for fire protection as required by 29 CFR 1910 Subpart L (OSHA General Industry Standards - Fire Protection).

6.3.4 Water for Fire Control [320 IAC 4.1-42-3(d)]

Water is supplied to the facility by the City of Beech Grove. This water can be used in conjunction with fire extinguishers to control potential fires.

REFINED METALS CORPORATION
REGULATED WASTE MANAGEMENT

MONTHLY INSPECTION LOG

YEAR _____

	TELEPHONES/ RADIOS FIRE	EXTINGUISHERS MEDICAL KITS	EMERGENCY SHOWERS	EYE WASH STATIONS	CAUSTIC SODA OR SODA ASH	INITIALS	COMMENTS
JAN							
FEB							
MAR							
APR							
MAY							
JUN							
JUL							
AUG							
SEP							
OCT							
NOV							
DEC							

255-007



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ATLANTA, GEORGIA 30328

REFINED METALS CORPORATION
BEECH GROVE, INDIANA

MONTHLY
INSPECTION LOG

FIGURE
6-2

REFINED METALS CORPORATION
REGULATED WASTE MANAGEMENT

INSPECTION LOG

YEAR _____

		QUARTERLY						SEMI-ANNUAL
		SUMPS	SUMP PUMPS	GATES	FENCING	SIGNS	INITIALS	COMMENTS
MONTH	JAN							
	APR							
	JUL							
	OCT							

255-006



LAKE ENGINEERING, INCORPORATED
6000 LAKE FOREST DR. SUITE 350
ATLANTA, GEORGIA 30328

REFINED METALS CORP.
BEECH GROVE, INDIANA

QUARTERLY
INSPECTION LOG

FIGURE
6-3

6.3.5 Aisle Space Requirements [320 IAC 4.1-41-6]

As shown on the aerial photograph and the topographic map, the container storage areas are readily accessible by paved roadways. Adequate "aisle space" is always available and no waiver of this requirement is required.

6.4 PREVENTIVE PROCEDURES, STRUCTURES AND EQUIPMENT

6.4.1 Loading and Unloading Operations [320 IAC 4.1-34 5(b) (8) (i)]

All facility employees that are authorized to operate tractors, forklifts, or other heavy equipment involved in the loading and unloading of hazardous waste are required to undergo an equipment operator's safety training course. In addition, all loading and unloading operations are monitored daily by the plant safety director to ensure they are conducted in a safe and proper manner.

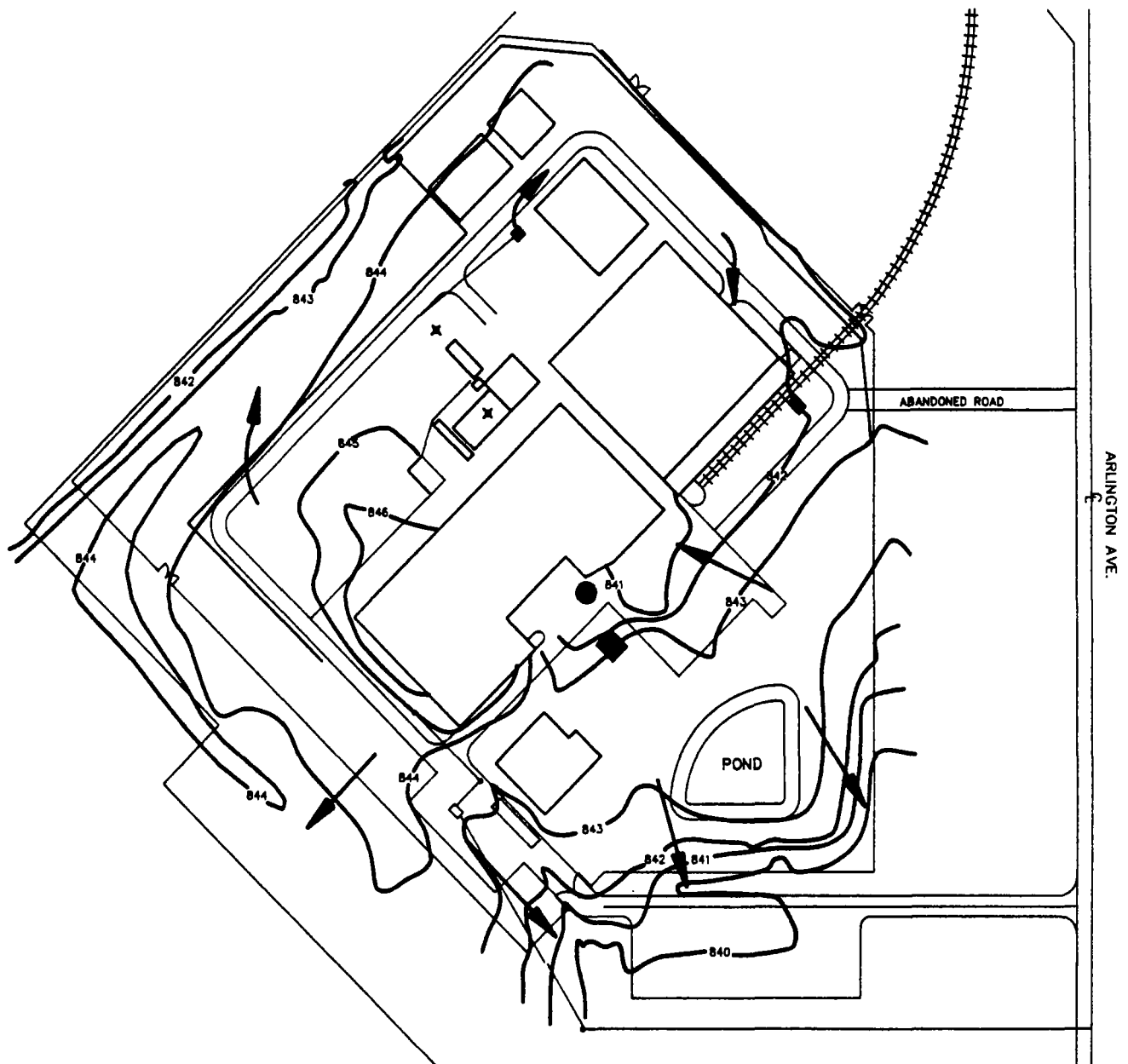
6.4.2 Run-off Prevention [320 IAC 4.1-34-5(b) (8) (ii)]

The run-off flow patterns based on the topographic map are shown in Figure 6-4. Included in the Figure are the locations of sumps, sump pumps and concrete barriers which are used to prevent run-off from the site. The run-off is currently collected, pumped to the on-site pond but will be treated by the on-site wastewater treatment plant prior to being discharged to the local sewer system.





6.4.3 Water Supplies [320 IAC 4.1-34-5(b) 9*0(iii)]

The facility receives potable water from the City of Beech

is under pressure which prevents the possible
is it can this
pond be regulated?
concern: runoff
may contain
high levels of
lead. will be?



LEGEND

-  844 CONTOUR
-  FLOW PATTERN
-  PUMP STATION
-  SUMP



100 50 0 100 200
SCALE IN FEET

255-024



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REFINED METALS CORP.
BEECH GROVE, INDIANA

RUNOFF FLOW
PATTERNS

FIGURE
6-4

intrusion of hazardous waste to the water source. The prevention of contamination of water supplies is also accomplished by eliminating the discharge of contaminated run-off to unprotected ground.

6.4.4 Equipment and Power Failure [320 IAC 4.1-34-12(8)(iv)]

In the event of a power failure, all production processes will cease. A power failure would not affect the container storage areas therefore requires no preventative actions. With power failure, the battery decasing operation will cease therefore, it will not effect wastewater treatment operation.

6.4.5 Personal Protection Equipment [320 IAC 4.1-34-5(b)(8)(v)]

The facility is subject to the provisions of 29 CFR 1910.1025 (U.S. DOL-OSHA Standard for Occupational Exposure to Lead) as well as other provisions of 29 CFR 1910. The facility's programs for compliance with these standards as well as the requirements of 40 CFR 270.14(b)(v) are presented in the General Health and Safety Program discussed in Section 7. This program provides for the use of respirators, safety glasses, hardhats, and protective coveralls for all employees who may handle hazardous waste.

6.5 PREVENTION OF REACTION OF IGNITABLE, REACTIVE AND INCOMPATIBLE WASTES [320 IAC 4.1-34-5(b)(9), 4.1-41(a)]

The facility does not handle ignitable, reactive or incompatible wastes, the provision of this section does not apply.

SECTION 7

CONTINGENCY PLAN

The information contained herein is submitted in accordance with the requirements for a Contingency Plan as contained in 320 IAC 4.1-34-5(b)(7), 4.1-43-1 through 4.1-43-7, and 4.1-43-8(b) and in 40 CFR 270.14(b)(7) and 40 CFR 264 Subpart D.

7.1 GENERAL INFORMATION [320 IAC 4.1-43-3(c), 4.1-42-7]

A contingency plan is required in order to minimize hazards to human health and the environment from an unplanned sudden or non-sudden release of hazardous waste to the air, soil, or surface water. Whenever a major release of hazardous waste to the environment occurs or is imminent, the emergency coordinator will be contacted immediately by plant personnel and the contingency plan will be implemented, if required.

The procedures which the emergency coordinator will follow to implement the contingency plan are detailed in Section 7.7 Emergency Procedures.

Arrangements have been made with the local police and fire departments to acquaint them with the facility's operations with respect to potential hazards, worker locations, entrances, on-site roads, and possible evacuation routes. An agreement has been made with the local ambulance service to provide emergency medical support to the plant site. Arrangements have been made with the local hospital to acquaint their staff with the nature of possible injuries or illnesses peculiar to handling the hazardous wastes managed at the facility. Documentation of these arrangements is

presented in Appendix A. No formal agreements or arrangements with other emergency response teams are needed.

Potential major emergencies at the facility which might arise are limited in nature. The type of emergencies which could occur, in the container storage areas, are limited to the release of hazardous waste to the environment by overturned drums of hazardous waste and sludges or major leaks caused by accidents where a pallet of batteries falling off of lifting equipment, that can not be contained within 10 minutes. The potential for fire or explosion in this area is virtually nonexistent. The contingency plan addresses these types of major emergencies and specific actions which are to be taken by plant personnel in the event they occur.

7.2 EMERGENCY COORDINATOR [320 IAC 4.1-43-3(d), 4.1-43-6]

The emergency coordinator for the facility is listed below:

Ron Widner
Plant Manager and Emergency Coordinator
(317) 887-0643 Home
(317) 787-6364 Work

At all times, the emergency coordinator is on the premises or on call and has the responsibility and authority to coordinate any emergency response measures necessary. This authority includes the ability to commit funds and resources to properly handle the emergency. The coordinator is thoroughly familiar with all aspects of this contingency plan: operations and activities described in this plant; the location and characteristics of the wastes handled; the location of all hazardous waste records; and the layout of the facility.

7.3 EMERGENCY EQUIPMENT LIST [320 IAC 4.1-43-3(e)]

The emergency and safety equipment lists are shown in Table 7-1. The equipment to be utilized in the event of an emergency includes communication equipment, fire extinguishers, medical kits, emergency showers, eyewash stations, spill neutralizer, and emergency response equipment.

7.4 IMPLEMENTATION OF THE CONTINGENCY PLAN

The decision to implement the contingency plan depends upon whether or not an imminent or actual incident could threaten human health or the environment. The purpose of this section is to provide guidance to the emergency coordinator in making this decision by providing implementation criteria.

The contingency plan will be implemented in the following situation:

1. Injury to employee - When the injury is of a serious enough nature such that medical attention above the level of first-aid is required.
2. Major spills or material release - When the spill could cause the release of toxic and/or corrosive liquid to the environment as follows:
 - * The spill can be contained on-site but the potential exists for groundwater contamination;
 - * The spill cannot be contained on-site resulting in the off-site soil contamination and/or ground or surface water contamination; or
 - * The spill cannot be contained within 10 minutes from the time of the spill.

TABLE 7-1
EMERGENCY EQUIPMENT LIST

<u>Item Description</u>	<u>Location</u>	<u>Quantity</u>	<u>Size/ Capacity</u>
Telephones	Guard House	1	N/A
	Main Office	9	N/A
	Casting and Furnace Building	5	N/A
	Battery Breaker Bldg.	1	N/A
Fire extinguishers	Guard House	1	20 lbs.
	Main Office	10	20 lbs.
	By Propane Station	1	20 lbs.
	Casting Furnace Building	16	20 lbs.
	Battery Breaking Building	2	20 lbs.
	Locker Room Building	1	20 lbs.
Medical Kits	Locker Room Building	1	N/A
Emergency Showers	Locker Room Building	1	N/A
Emergency Eyewash	Locker Room Building	1	N/A
	Battery Wrecker Building	1	N/A
Soda Ash	Casting and Furnace Building	1	N/A
Forklifts	General Yard Area	5	N/A
Front-end Loaders	General Yard Area	3	N/A
Tractor	Container Storage Areas	3	N/A
Trailers	Container Storage Areas	3	N/A

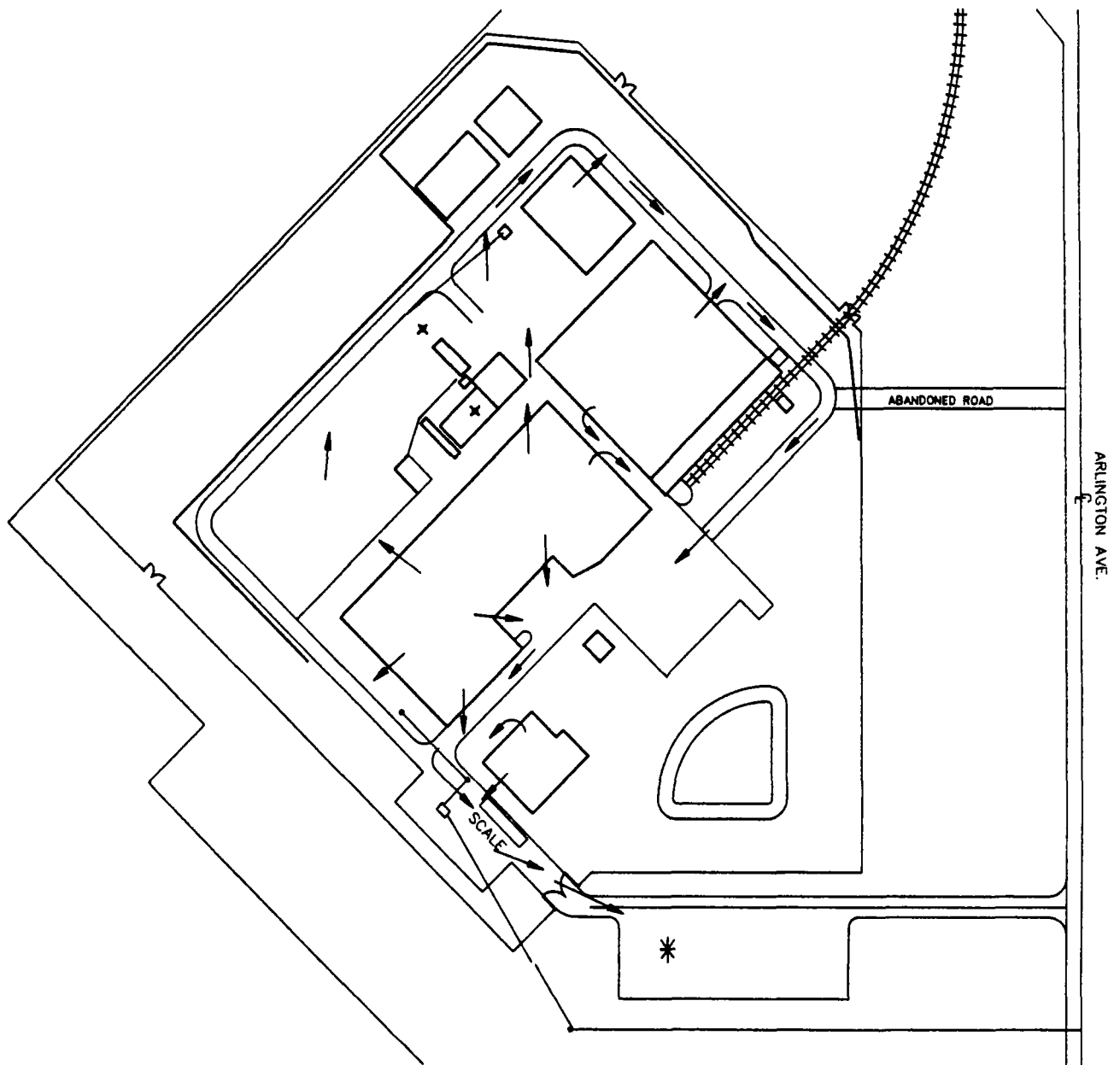
7.5 EVACUATION PLAN [320 IAC 4.1-43-3(f)]

In the event of an emergency requiring the evacuation of the facility, the routes to be taken are shown in Figure 7-1. All employees will exit the facility at the entrance gate adjacent to the guard station and assemble in the employee parking lot.

7.6 EMERGENCY RESPONSE PROCEDURES [320 IAC 4.1-43-3(a), 4.1-43-7(d)]

7.6.1 Notification [320 IAC 4.1-43-7(a)]

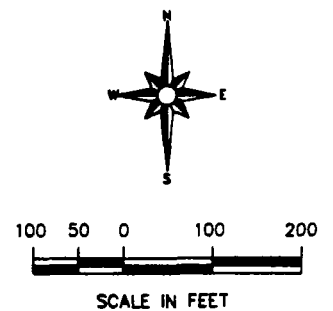
In the event of an emergency situation the emergency coordinator will be notified first. The employees should either locate the emergency coordinator directly or call the front office and have him located. The emergency coordinator upon arrival will evaluate the situation to determine the need to implement the Contingency Plan. If the plan is to be implemented, the front office will be notified that the plan is being implemented. The front office will contact by phone all buildings associated with the implementation of the plan. Subsequently, all appropriate plant personnel, appropriate federal, state, or local agencies, and appropriate emergency response services will be notified. All employees who are not helping with the emergency will evacuate the facility and wait in the employees parking lot until they are notified that it is safe to continue working. The emergency coordinator will notify all employees located in the parking lot when the emergency has been controlled and work can continue.



LEGEND

→ EVACUATION ROUTE

* MEETING PLACE



255-014



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REFINED METALS CORP.
BEECH GROVE, INDIANA

EVACUATION
ROUTES

FIGURE
7-1

7.6.2 Identification of Hazardous Wastes [320 IAC 4.1-43-7(b)]

The emergency coordinator will immediately identify the nature, source, amount and area of the release. The initial identification method will be to utilize visual analysis of the material and the location of the release. The emergency coordinator is familiar with the location and type of waste stored at the facility and a visual inspection is adequate for immediate identification. The releases will be associated with batteries leaking acid, spilled lead contaminated sludges, or manifested hazardous waste that is analyzed when received by the facility.

7.6.3 Assessment [320 IAC 4.1-43-7(c), 4.1-43-7(d)]

The emergency coordinator will assess possible hazards, both direct and indirect, to human health or the environment. The coordinator will evaluate the situation and determine, based on knowledge concerning hazards associated with the secondary lead smelting industry, if possible health and environmental hazards exist. This could include, but is not limited to acid contact, lead contaminated smoke, inhalation, or falling structures. The effects of smoke on adjacent residences are minimal since the direction is away from local residential areas.

7.7 EMERGENCY PROCEDURES

The emergency procedures which will be followed by the emergency coordinator in implementing the contingency plan are detailed below.

1. In the event of major emergencies, notify all plant personnel of the situation by telephones and verbal communication.

Evacuate personnel, if deemed necessary. For general emergency situations verbally alert personnel in the area of the emergency.

2. Contact state and local agencies with designated response roles by telephone if their assistance is required. A list of emergency telephone numbers are shown in Table 7-2.

3. Whenever there is a release, fire, or explosion, the emergency coordinator will immediately identify the character, exact source, amount, and the extent of any released materials. He will do this by observation, followed by review of facility records or manifests and, if necessary, by chemical analysis.

4. Concurrently the emergency coordinator will assess possible hazards to human health or the environment that may result from a release, fire, or explosion. This assessment will consider both direct and indirect effects of a release, fire, or explosion (e.g., the effects of any toxic, irritating, or asphyxiating gases that are generated, or the effects of any hazardous surface run-off from water or chemical agents used to control fire and heat-induced explosions).

5. If the emergency coordinator determines that the facility has had a release, fire, or explosion which could threaten human health, or the environment, outside the plant, he will report his findings as follows:

TABLE 7-2

TELEPHONE DIRECTORY OF EMERGENCY SUPPORT SERVICES

Poison Information Center	1-800-292-6678
Ambulance (*)	1-317-787-3311
Beech Grove Fire Dept. *	1-317-782-4940
Local Doctor - Dr. Jones	1-317-787-3311
Saint Francis Hospital	1-317-787-3311
Beech Grove Police Department (*)	1-317-782-4949
Marion County Sheriff's Department	1-317-633-5181
Indiana Highway Patrol	1-317-232-5533
Environmental Protection Agency (Emergency Branch)	1-312-353-2000
Indiana Department of Environmental Management (Indianapolis)	1-317-232-3220
United States Corp of Engineers	1-317-549-5003
National Response Center	1-800-424-8802

(*) Also use the Emergency 911 number

- (a) If his assessment indicates that evacuation of local areas may be advisable, he will immediately notify local authorities. He will be available to help appropriate officials decide whether local areas should be evacuated; and
- (b) He will immediately notify the government official designated as the on-scene coordinator for the geographical area or the National Response Center, and the Indiana Department of Health and Environment. If the release is a spill, the U.S. Coast Guard will be notified. These reports will include:
- (i) Name and telephone number of reporter;
 - (ii) Name and address and EPA identification number of the plant (IND000718130);
 - (iii) Time, date, location and type of incident;
 - (iv) Name and quantity of material(s) involved, to extent known;
 - (v) The possible hazards to human health of the environment outside the plant.

6. During an emergency, the emergency coordinator will take all responsible measures necessary to ensure that releases, fires, and explosions do not occur, recur, or spread to other hazardous waste material at the facility. The emergency coordinator will have employees prepare all mobile emergency equipment, acid neutralization material, and shovels to respond according to instruction given to minimize additional emergencies. These measures

will include, where applicable, stopping processes and operations, collecting and containing released waste, and removing or isolating containers using forklifts and/or front-end loaders. Major spills will be contained as listed below:

- a. The ruptured container will be removed from the container storage area and placed in a 55 gallon drum.
 - b. The battery acid will be contained by constructing a soil berm to prevent run-off of acid from the immediate area. Shovels shall be used to distribute soil for berm construction. A front-end loader can also be used for larger spills if required.
 - c. Steps will be taken to neutralize the acid to a pH of 6.0 and 9.0. The acid will be neutralized by using a caustic soda or soda ash located in the casting building. The neutralizer shall be transported to the spill in buckets and spread over the spill in sufficient quantities to absorb the acid.
 - d. The neutralized acid, soda ash or caustic soda, and the soil berm will then be recycled through the furnace to remove any lead that has dissolved in the acid. The neutralized material should be removed from the surface using either a shovel or front-end loader and transported to the furnace in either a 55 gallon drum or the front-end loader the surface where the spill occurred. The furnace shall be cleaned sufficiently to remove all residue. The water should be directed to the sumps to allow for proper treatment of the water by the on-site wastewater treatment plant.
 - e. The leaking container placed in the 55 gallon drum will be recycled. The 55 gallon drum shall be transported to the furnace using a front-end loader or forklift.
7. If the plant stops operations in response to a release, fire, or explosion, the emergency coordinator will visually monitor for leaks, pressure build-up, gas generation, or ruptures in valves, piping, or other equipment, wherever this is appropriate. Monitoring will include the checking of gauges, looking for leaks in pipes, and listening for pressure build-up.

8. Immediately after an emergency, the emergency coordinator will provide for treating, storing, or disposing of recovered waste, contaminated soil or surface water, or any other material that results from release, fire or explosion at the facility. The emergency coordinator will use on-site mobile equipment (forklifts, tractor trailers and/or front-end loaders) to remove the material. Shovels, brooms, and other equipment will be used to remove residue. The collected material will be placed in 55 gallon drums and the drums will be labeled. The emergency coordinator will evaluate the material (lead content) to determine if the material will be fed into the furnace or manifested off-site (if classified as hazardous waste) to a registered treatment, storage, or disposal (TSD) facility. The surface spill location will be cleaned using water, the water will be collected in on-site sumps, and the water processed in the on-site treatment plant.

9. The emergency coordinator will ensure that, in the affected area(s) of the facility:

- (a) No waste that may be incompatible with the release material is treated, stored, or disposed of until procedures are completed; and
- (b) All emergency equipment used in the emergency response will be cleaned by triple rinsing the equipment to remove any residue left from its use and prepare it for its intended use before operations are resumed. The rinsate will be collected and treated.

10. The facility will notify the Indiana Department of Environmental Management and any other appropriate state and local authorities, that the plant is in compliance with Item No. 9 in this Section before operations are resumed in the affected area(s) of the facility.

11. The facility will note in the operating record the time, date, and details of any incident that requires implementing the contingency plan.

12. Within 15 days after the incident, a written report will be submitted to the Indiana Department of Environmental Management which includes the following:

- (a) Name, address, telephone number and EPA identification number (IND000718130) of the facility;
- (b) Date, time, location and type of incident;
- (c) Name and quantity of material(s) involved;
- (d) The extent of injuries, if any;
- (e) An assessment of actual or potential hazards to human health or the environment, where applicable; and
- (f) Estimated quantity and disposition of recovered material that resulted from the incident.

13. If the release is a spill, a Hazardous Waste Spill Report will be submitted within 15 days of the incident to the Indiana Department of Environmental Management. This report will contain the information specified in No. 12 of this Section, plus the following items:

- (a) A brief description of the circumstances causing the

spill;

- (b) Waste Code Number and composition by chemical content and percent of principal components and contaminants present by weight;
- (c) Process producing the waste;
- (d) A description of the actions the generator has taken by the time of the report to contain, clean-up and disposal of the spilled hazardous wastes; and
- (e) A description of what further actions the generator intends to take to ensure that spilled waste no longer can present a hazard to human health and the environment.

7.8 REQUIRED REPORTS

As required by 40 CFR 264.56(j), any emergency event that requires implementing the contingency plan will be reported in writing within 15 days to the EPA Regional Administrator. A reporting form for emergency events is shown in Figure 7-2.

In addition to these reporting requirements for the State and Federal authorities, the facility has internal reporting requirements. The following incidents require that an incident report be completed and returned to the plant manager within one day and made part of the operating record:

- (1) All fires;
- (2) All liquid and oil spills;
- (3) All injuries - no matter how slight;
- (4) All equipment damage due to malfunction or operating error; and

FIGURE 7-2

REPORTING FORM FOR EMERGENCY EVENTS

Name, address and phone number of owner or operator

Name, address and phone number of facility

Date, time and type of incident (e.g., fire, explosion, etc.)

Name and quantity of material(s) involved

Extent of injuries (if any)

Assessment of actual or potential hazards to human health or the environment (if applicable)

Estimated quantity and disposition of material recovered from the incident.

- (5) All "near misses" of the above variety that could have had serious consequences.

7.9 COPIES OF THE CONTINGENCY PLAN

A copy of the contingency plan and all revisions will be maintained at the facility and submitted to all local emergency services. These services include the local police and fire department, hospital, and state and local emergency response teams with whom arrangements have been made to provide emergency services to the facility.

7.10 AMENDMENTS TO THE CONTINGENCY PLAN

The contingency plan will be reviewed and immediately amended, if necessary, whenever:

- (1) the facility permit is revised;
- (2) the plant fails in an emergency;
- (3) the facility changes in its design, construction, operation, maintenance or other circumstances in a way that materially increases the potential for fires, explosions, or releases of hazardous waste constituents, or changes in the response necessary in an emergency;
- (4) the list of emergency coordinators change; and
- (5) the list of emergency equipment changes.

SECTION 8

PERSONNEL TRAINING

The facility requires that every employee successfully complete a program of classroom orientation and periodic refresher sessions in accordance with EPA hazardous waste training requirements and the OSHA lead standards. This training includes personnel training requirements pertaining to the container storage area as well as other potential hazards associated with operations conducted at the facility as required by 320 IAC 4.1-43-5(b)(12) and 4.1-41-7.

8.1 OUTLINE OF TRAINING PROGRAM [320 IAC 4.1-41-7(a)(1)]

Each employee received a "Safety and Training Manual" that contains the training program instituted at the facility. The Safety and Training Manual contains rules associated with safety in the workplace and training which meets EPA hazardous waste training and OSHA requirements. Appendix B contains a copy of the "Safety Training Manual" and Appendix C contains additional training handouts. This manual was developed by the facility and is currently being initiated.

The elements of the manual's training program are listed below:

- * Safety - Medical Program
- * Blood Lead Monitoring
- * Respirator Equipment
- * OSHA Hazard Communication Standard (Worker's Right-to-Know)
- * Proper Industrial Hygiene Practices

- * Management of Container Storage Area
- * How to Read and Interpret Container Labels
- * How to Read and Interpret MSDS
- * Contingency Plan

8.1.1 Training Personnel [320 IAC 4.1-41-7(a)(2)]

The training coordinator is John Saucerman. Mr. Saucerman Hayes has twenty-six years experience with the facility with responsibilities which range from front office work to the general foreman. Mr. Saucerman has been the Health and Safety Coordinator for the past six years. Mr. Saucerman is very familiar with potential effects of wastes associated with the secondary lead smelter business.

8.1.2 Personnel Required to Complete Program [320 IAC 4.1-41-7(d)(1), 4.1-7(d)(2)]

All employees are required to take training at the facility. Specific details of each training session is based on the individuals job responsibilities. Job responsibilities and training requirements are described in the individual's job descriptions listed in the back of the "Safety and Training Manual" (Appendix B) and in Appendix D "Job Descriptions."

8.2 OUTLINE PROGRAM

8.2.1 Training Content, Frequency and Techniques [320 IAC 4.1-41-7(c) and (d)(3)]

The employees at the facility are required to take training from the sessions outlined in Section 8.1. The training is required for all employees within 6 months after the effective date of employment, on an annual basis, and at anytime determined by the

training program coordinator.

The facility's training techniques include handouts, pamphlets, on-the-job training and film presentations. These techniques are implemented to educate the employee in the proper manner to provide safety to health and the environment.

8.2.2 Content of the Training Manual

As mentioned earlier, all employees receive a copy of the "Safety and Training Manual" prepared by the facility at the time employment is initiated. All current employees have a copy of the manual. The outline of the manual is shown in Table 8-1.

8.2.3 Design of Training Relative to Position [320 IAC 4.1-41-7 (a)(2)]

The level of training for employees is based on the required knowledge of each employee relative to their job position and responsibilities. Training requirements are divided into broad and limited instructions. The level of training based on position is shown in Figure 8-1.

8.2.4 Training for Emergency Response [320 IAC 4.1-41-7(a)(3)]

All employees are trained in emergency response in case of emergency. The employees are required to be familiar with the Contingency Plan as described in Section 7. The Contingency Plan describes when to implement the plan, evacuation routes, emergency phone numbers, emergency equipment locations, and hazardous waste assessment. The organizational chart shown in Figure 8-2 describes the immediate supervisor that employees should notify in case of emergency.

TABLE 8-1

OUTLINE OF TRAINING MANUAL

Product Quality

Cooperating For Safety

Unsafe Conditions

Accidents

Safety Equipment

Hazards

Working With Lead

Working With Acids

Safety Practices

Injury

Serious Injury

First Aid

Bleeding

Burns

Chemical Exposure

Injuries (Chemical)

Injuries (Foreign Bodies)

Fractures, and Back Injuries

Heat Exhaustion, Sun Stroke, and Fainting

Shock

General Safety

Compressed Gas Cylinders

Electrical Work

Elevated Work

Ladders

Fire Protection

Lifting

Mobile Equipment

Personal Protective Equipment

Industrial Hygiene Practices

General

Respiratory Protection

Ingestion

Dermatosis

Hearing Loss

Heat Stress

TABLE 8-1 (CONT'D.)

OUTLINE OF TRAINING MANUAL

Contingency Plan

General

Emergency Coordinator

Implementation of the Contingency Plan

Evacuation Plan

Emergency Response Team

Emergency Procedures

Injury Procedures

Training Program

Federal Requirements

Training Elements



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4000 LANTZ FOREST DR. SUITE 560
ATLANTA, GEORGIA 30328

REFINED METALS, INC.
BEECH GROVE, INDIANA

LEVEL OF
TRAINING

FIGURE
8-1

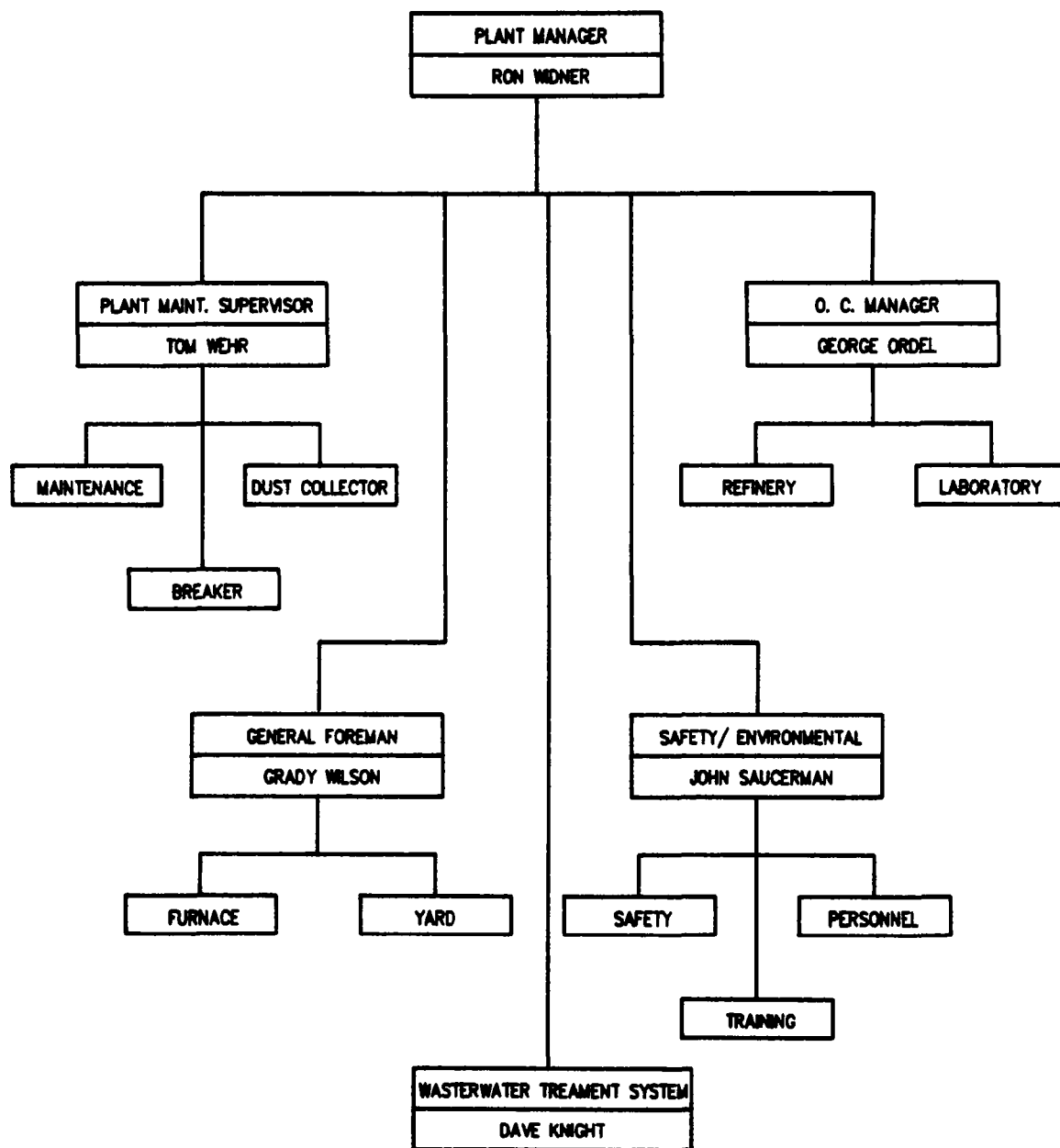
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LEGEND

B - BROAD
L - LIMITED

TYPE OF TRAINING

INDIVIDUAL	PERSONNEL TRAINING	RELEASE PREVENTION AND RESPONSE	CONTINGENCY PLAN	EMERGENCY PROCEDURES	HAZARDOUS WASTE MANAGEMENT AND PRACTICES	RECORD KEEPING	HAZARDOUS WASTE HANDLING AND OPERATIONS
PLANT MANAGER	B	B	B	B	B	B	B
PLANT FORMAN	B	B	L	B	L	L	B
OPERATIONS CONTROL MANAGER	B	B	B	B	B	B	B
WASTEWATER MANAGER	B	B	B	B	B	B	B
SAFETY/ ENVIRONMENTAL	B	B	B	B	B	L	B
MAINTENANCE	B	B	B	B	B	L	B
BREAKER	B	B	B	B	B	B	B
DUST COLLECTOR	B	B	B	B	B	B	B
FURNACE	B	B	B	B	B	B	B
YARD	B	B	B	B	B	B	B
REFINERY	B	B	B	B	B	B	B
LABORATORY	B	B	B	B	B	L	B



255-015



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ATLANTA, GEORGIA 30328

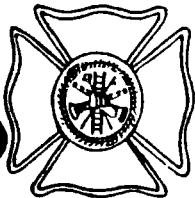
REFINED METALS CORP.
BEECH GROVE, INDIANA

ORGANIZATION
CHART

FIGURE
8-2

8.3 IMPLEMENTATION OF TRAINING PROGRAM [320 IAC 4.1-47(b)(d)(4)
and (e)]

The majority of the new training program was currently being initiated by the facility, but new additional RCRA training requirements are being added. The new training program being initiated includes the information in the "Safety and Training Manual". The new manual assures the facility that each employee receives the training required by the individual job description.



Beech Grove Fire Department

330 East Churchman Avenue Beech Grove, Indiana 46107



Chief Paul McDermott

782-4940

April 15, 1987

John Sauceman
Refined Metals Corporation
3700 S. Arlington Avenue
Indianapolis, IN 46203

Dear John:

This letter is to acknowledge our having received your Incident Contingency Plan and Material Safety Data Sheets.

We understand that as changes occur, you will update the Material Safety Data Sheets and your Contingency Plan as required.

Your cooperation is appreciated.

Yours for a safer Beech Grove,

James M. Bright, Deputy Chief
Beech Grove Fire Department

JMB/jy

ST. FRANCIS
OCCUPATIONAL HEALTH CENTER

3417 SOUTH SHERMAN DRIVE
SUITE A
BEECH GROVE, INDIANA 46107

(317) 782-3009

June 16, 1987

John Saucerman
Refined Metals
Box 188
Beech Grove, In 46107

Dear Mr. Saucerman:

Receipt of this letter is to confirm our relationship to Refined Metals as your health care provider for job related problems.

The Occupational Health Center is a department of St. Francis Hospital and we will coordinate care for medical emergencies with the other hospital departments.

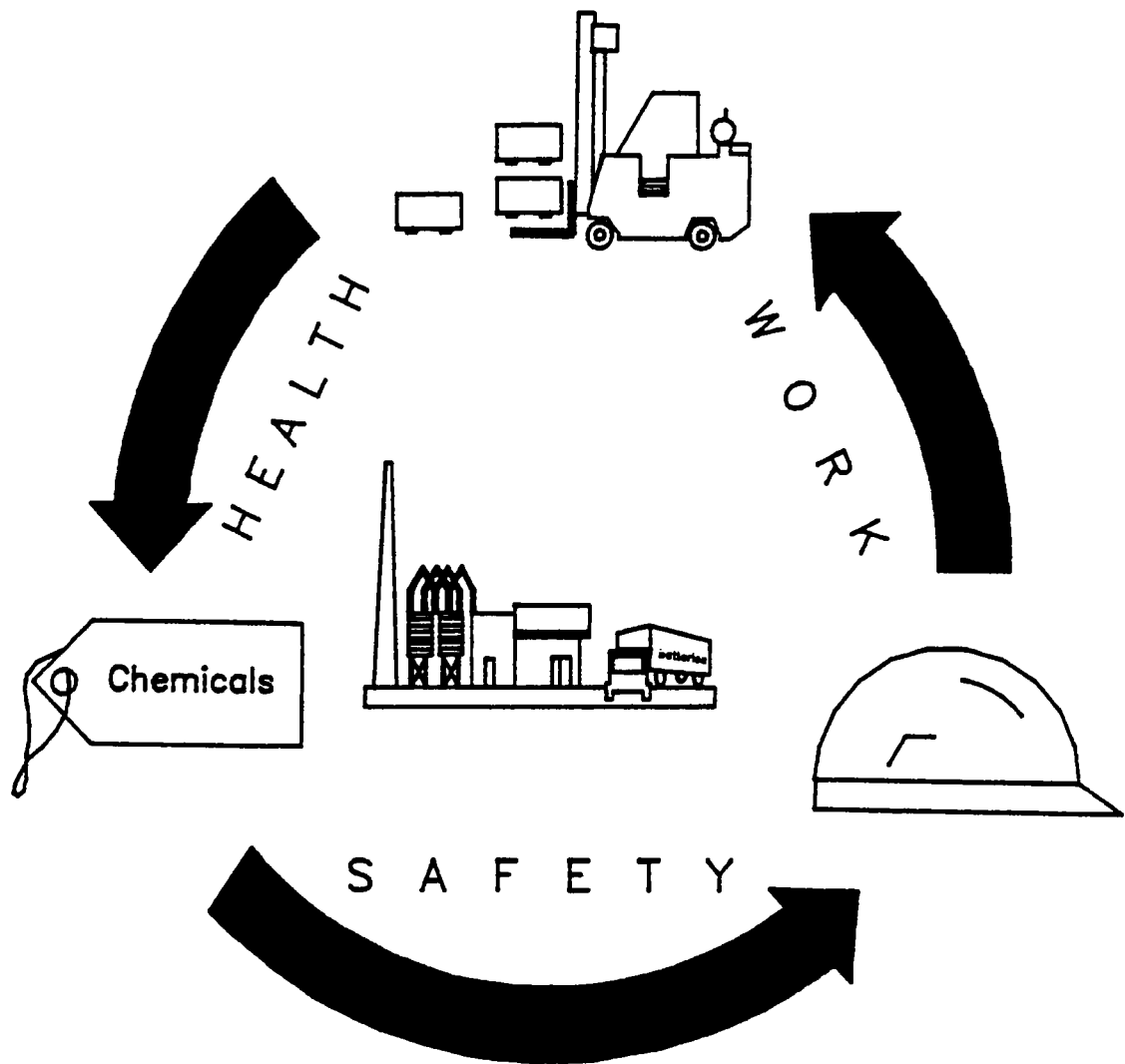
Sincerely,

Eleanor M. Bachmann

Eleanor M. Bachmann, Director
Occupational Health Center

EMB/tln

REFINED METALS



TRAINING AND SAFETY MANUAL

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DESCRIPTION OF CONTENTS

This manual is designed to provide general guidance in the area of maintaining healthful and safe working conditions. It does not provide specific directions for unique job descriptions. Rather, it provides a framework from which specific measures for unique jobs can be derived.

PRODUCT QUALITY

All of us, as employees, are faced with the challenge of maintaining the company's outstanding reputation and healthy competitive position in the secondary lead smelting industry. Because of increasing competitive pressures, we cannot be content with the past successes. We must seek out and pursue new techniques to achieve higher quality, more efficiently. This we can do by combining individual ingenuity with team effort. It applies to all of us in every department regardless of our job.

Having a quality product means doing your job right the first time; suggesting better ways to do the job; applying creativity; eliminating wasteful practices and reducing injuries.

Customers have entrusted their needs to us for many years. In order to retain their valued business and attract new customers each employee must make a personal commitment to have a quality product. Your individual contribution will benefit your department and your plant.

COOPERATING FOR SAFETY

The company not only observes the state and federal laws and regulations regarding accident prevention, safety devices and sanitary working conditions for employees, but also endeavors in every way possible to make its facility clean. The company expects its employees to observe the accident prevention rules and to consistently practice safety in the performance of their daily tasks. Safety and the prevention of accidents are largely a matter of cooperation between the employees, and the employees and management. You may feel that safety devices and rules are unnecessary now, but remember, one moment of thoughtlessness or recklessness may cause a lifetime of regret.

UNSAFE CONDITIONS

Any unsafe condition must be reported immediately to your Supervisor so that corrective action can be initiated.

ACCIDENTS

Any accident or injury to you or a fellow employee, no matter how small, must be reported immediately to your Supervisor. First aid/medical treatment will be provided.

SAFETY EQUIPMENT

Certain operations in all facilities require the use of safety equipment such as gloves, safety glasses, shields, protective shoes, respirators, etc. All employees performing these operations must use the required equipment as it is provided to protect against injury. In addition, when safety guards have been installed on the equipment they must always be in position when the equipment is in use.

HAZARDS

WORKING WITH LEAD

There is lead oxide, lead dust and other lead compounds in the material which you handle in the facility. All reasonable precautions have been and will be taken by the company to minimize and eliminate the employees exposure to these compounds. The company invests heavily in vacuum and exhaust ventilation equipment around the furnaces to keep lead dust out of the air. The dust is continuously drawn from the area and collected in filters to prevent it from being expelled into the atmosphere. Samples of air are taken and analyzed on a regular basis to assure that the amount of lead in the air is at an acceptable level.

As a continuous precaution, all workers at the facility are required to provide blood samples. The samples are analyzed in a laboratory by authorized medical personnel to determine the amount of lead in the body. The results of this analysis are plotted on the employees blood level content chart. Should an employee's blood level content show lead in excess of the established limits, the employee is notified and corrective action is taken. In a short period of time the excess lead is eliminated from the body and the blood lead level will return to normal.

There are two ways that lead enters the body: by swallowing or breathing the dust. As an employee in a secondary lead smelter there are certain common safety precautions that must be followed when working with lead. To reduce the possibility of lead absorption you must follow the precautions listed below:

- * Keep your hands away from your mouth and wash them carefully before you eat or handle anything that will be placed in your mouth.
- * Take a shower before leaving work. Washing your hair on a daily basis is required.
- * Keep fingernails short and clean.
- * Never wear your dirty work clothes away from the job. Shower and change into your street clothes before going home.
- * Food, tobacco and supplies of drinks are prohibited in any work area where lead dust or lead fumes may be present.
- * No smoking areas must be observed.
- * Use your respirator when told to do so. Never lay respirator at a contaminated work place, machine, or other dirty area. Remove work gloves when leaving the work station as on breaks or at lunch. At these times, take your respirator with you, being careful to keep it clean internally.
- * Be sure your face and hands are clean prior to handling your respirator. The wearer must be clean shaven. A beard interferes with the air seal of the mask.
- * Check your respirator prior to beginning work and periodically throughout the shift.
- * Remember, if your respirator is properly inspected and maintained, it is an excellent safety device for reducing your exposure to lead. If not properly cared for, it is just another source of contamination.

WORKING WITH ACID

All acids encountered during battery decasing are diluted acid. This helps eliminate the danger of receiving a severe burn from the acid. The acid (sulfuric acid) is a very corrosive liquid that will burn if left on the skin. For this reason, whenever you get acid on your skin it must be washed off immediately. Should you get some acid in your eye, rinse it immediately with a large volume of water and report to first aid at once. Eye wash stations and emergency showers are located in the battery decasing building.

When you are assigned to work in the battery decasing building, you will be provided with personnel protective devices and clothes. Please show respect for these articles issued for your use. Coveralls, rubber gloves, boots, safety glasses and other such work apparel and protective devices are provided for your safety. Wear the equipment properly.

By complying with all safety rules and recommendations your chances of sustaining an injury or condition which might result in your being unable to work are lessened greatly. You, the individual worker, are the foundation of our safety program. It is your responsibility to do everything possible to work safely and observe all safely rules and regulations.

SAFE PRACTICES

INJURY

- * All injuries and illness, no matter how minor, must be reported to your immediate Supervisor as soon as you become aware of the condition. You may report to any Supervisor if your own is not immediately available.
- * The first aid room is located in the employees locker room. A first aid station is also located in the Safety Officers office.

SERIOUS INJURY

- * Send someone to notify the Supervisor.
- * Determine the nature of the injury.
- * Determine if it is safe to leave the person in place. Only trained people should moved an injured person unless there is a clear danger to the injured person at his present location.
- * If Supervisor is not immediately available, call 911 to arrange for transportation and medical assistance.
- * Perform first aid according to your ability.

FIRST AID

The following is a condensed guide for first aid:

ARTIFICIAL RESPIRATION (Mouth-to-Mouth)

If there is foreign matter visible in the mouth, wipe it out quickly with your finger or a cloth wrapped around your finger.

- a. Tilt the head back so the chin is pointing upward. Pull or push the jaw into a jutting out position.
- b. Open your mouth wide and place it tightly over the victim's mouth. At the same time pinch the victim's nostrils shut or close nostrils with cheek, or close the victim's mouth and place your mouth over the nose. Blow into the victim's mouth or nose.
- c. Remove your mouth, turn your head to the side and listen for the return rush of air that indicated air exchange. Repeat the blowing effort. For an adult, blow vigorously at the rate of about 12 breaths per minute. For a child, take relatively shallow breaths appropriate for the child's size, at the rate of about 20 per minute.
- d. If you are not getting air exchange, recheck the head and jaw position. If you still do not get air exchange, quickly turn the victim on his side and administer several sharp blows between the shoulder blades in the hope of dislodging foreign matter. Again sweep your fingers through the victim's mouth to remove foreign matter.
- e. Those who do not wish to come in contact with the person may hold a cloth over the victim's mouth or nose and breathe through it. The cloth does not greatly affect the exchange of air.

BLEEDING

To stop bleeding, apply pressure with a pad of cloth directly over the wound. The use of the pressure point method may be helpful for quick, temporary, partial control until cloth for direct pressure is obtained. Keep the injured warm and lying down, with the wound elevated, if practical. In extreme cases, where the injured may lose life due to the loss of blood, use a tourniquet.

BURNS

There are three general types of burns: thermal burns, sunburn, and chemical burns.

Burns are also classified according to depth or degree:

- * First degree - skin is reddened.
- * Second degree - blisters develop.

* Third degree - there is deeper destruction, the underlying growth cells, that continually form new skin are destroyed.

1. Immersion of burns in ice water baths (not colder than 41° F nor warmer than 55° F) or the application of ice cold moist towels to burned areas is recommended as first aid emergency management for burns involving less than 20% of the body surface. The burned area is immersed immediately into a large basin or other vessel of cold water to which ice cubes are added. If the burned part cannot be immersed, apply cold wet towels or gauze pads from the ice water. The time factor between injury and treatment determines the results. Continue cold treatment until pain does not return or re-occur, this may be from 30 minutes to as long as 5 hours.
2. On second and third degree burns over a large part of the body, shock is a major hazard. Get the person under medical care as soon as possible.
3. Chemical burns shall be rinsed with water to remove chemicals.
4. The exclusion of air from a burn by the application of a thick dressing relieves pain and if the dressing is sterile, prevents further contamination.

CHEMICAL EXPOSURE

If sprayed or splashed with hazardous chemicals, get under the safety shower located in the Battery Breaking Building or the employee locker room and rinse yourself promptly and thoroughly. All clothing, including shoes, and socks, should be removed as soon as possible.

EYE INJURIES (Chemical)

Flush with plenty of water for a minimum of 15 minutes. The best known treatment for any chemical in the eye is prompt and thorough flushing of the material from the eyes with water. Unless this is done, the eye tissue may be permanently damage.

EYE INJURIES (Foreign Bodies)

Never attempt to remove, or have anyone but a doctor, nurse, or trained person remove a foreign body from the eye. Avoid rubbing your eyes since this may break up the object

and rub it deeper into the tissue. Flushing may help. Report all eye injuries to your Supervisor for evaluation and treatment.

FALL, FRACTURES, AND BACK INJURIES

Keep the injured as still and as warm as possible. Reassure him that help is on the way. Only trained persons should attempt to move him, since unskilled moving may result in further injury or complication.

HEAT EXHAUSTION, SUN STROKE, AND FAINTING

Remove the person to an area of circulating air. Keep him lying down with head low. No pillows or pads. Keep him warm. Firm hand pressure will often relieve the pain of muscle cramps. Get the person under medical care as soon as possible.

SHOCK

In case of severe injury, it should be presumed that shock will be present. Wrap the patient in a blanket to conserve body heat. Warm drinks may be given in small amounts if the person wants them. Get medical care without delay. In case of electrical shock, artificial respiration may be required.

GENERAL SAFETY

- * Avoid horseplay.
- * Work according to the best established methods.
- * Operate and perform tasks only after you are properly trained.
- * Only licensed operators may use mobile equipment.
- * Walk unless an emergency requires running.
- * Report all unsafe conditions and unsafe practices to a Supervisor.
- * Report all injuries and illness to a Supervisor.
- * Replace all guards before starting equipment.
- * Keep walkways free of all tools and litter.
- * Do not drop or throw tools from elevated locations.
- * Know the location of the nearest eye wash, shower, fire

extinguisher, telephone and first aid station.

- * Compressed air or gas must never be directed at any part of the body.
- * All excavations and ground or floor holes one foot wide or more must be guarded or barricaded.

COMPRESSED GAS CYLINDERS

- * Protection caps must be kept on compressed gas cylinders at all times when not actually connected to equipment unless regulators are attached. This will prevent accidental opening and breaking of valves. Oxygen must never be used to blow off clothing or to freshen air in closed containers. Repair to cylinder valves and regulators are to be made by trained personnel only.
- * Upright cylinders must be secured by chains, wire, or suitable racks.
- * Empty cylinders shall be stored separately from full cylinders. Fuel cylinders shall not be stored with oxygen cylinders. Fuel and oxygen cylinders must be separated by a fire wall or a distance of 20 feet.
- * Empty cylinders shall be returned to the storage area promptly. Valves must be closed and protective caps replaced.
- * Leaks must be located using soapy water, never use matches or flames. (Do not use soap on oxygen equipment)
- * Wrenches shall be left in place on cylinders without hand valves.
- * Always open valve slowly. The regulator adjusting screw must be released all the way before opening the cylinder valve.
- * If a cylinder valve cannot be opened by hand, arrange to return it to the supplier. Do not open a hand valve with a wrench or hammer.
- * Always handle cylinders carefully. They must not be dropped, struck, or allowed to strike each other violently.
- * Cylinders must not be rolled on their sides. Full or empty, they must be carried by two people or rolled,

slightly tipped, on the bottom end when handled manually.

- * Caps must be screwed on firmly at all times when cylinders are not in use.
- * Rope and chain slings must not be used for hoisting or lowering. Always use a rack or boat.
- * Cylinders designed for vertical use shall always be stored or used in a vertical position.
- * Full or empty cylinders must never be exposed to excessive heat. Keep out of direct sunlight if possible.
- * Allow no oil, grease, acid or soap to come in contact with oxygen cylinders. Store grease and oil more than twenty feet away.

ELECTRICAL WORK

- * Do not use electrical equipment or activate circuits if your hands are wet or if you are standing on wet ground.

- * Extension cords should be inspected for breaks in the insulation, kinks and exposed strands of wire before each use.
- * Extension cords, welding leads and temporary service cable must not cross main thoroughfares or lay in water.
- * Only authorized employees shall start and stop electrically powered equipment.
- * Before starting a piece of equipment, make sure it is clear and no one is working on it.
- * If it does not start or run properly, electrical repairs shall not be attempted.
- * Only electricians are allowed to make changes in electrical equipment and wiring.
- * Working on live circuits must be avoided when possible.
- * Lock and tag the starter and when possible, remove the fuse before working with electrical equipment.
- * Electrical power tools must be properly grounded before using.
- * In all cases of electrical shock to employees in the plant, however minor, the employee shall report the incident to their Supervisor as soon as possible.

ELEVATED WORK

- * Elevated work is work performed at or over 4 feet above ground or floor level. Elevated work must be performed on a catwalk with guard rails, an approved scaffold with guard rails or a properly placed ladder. If these methods are impractical, a stable structural member or equivalent may be used with Supervisor approval and proper fall protection.
- * When performing elevated work at or above 15 feet above ground or floor level and a catwalk and scaffold is not available, a safety harness and lanyard must be worn and connected to a stable structural member.
- * When performing elevated work at or over 4 feet above equipment or non-flat surface and a catwalk or scaffold is not available, a safety harness and lanyard must be worn and connected to a stable structural member.

- * A "Caution - Falling Material Hazard" sign or yellow barricade must be effectively placed beneath all elevated work at or over 7 feet above ground or floor level.
- * Do not work or pass under scaffolds, suspended loads or elevated work unless absolutely necessary and with Supervisor approval.
- * Tools must be carried in a tool belt or hoisted by rope and bucket to all elevated work sites over 15 feet above ground or floor level unless a stairway provides access.

LADDERS

- * Straight ladders must have non-slip shoes.
- * Extension ladders must not be taken apart and used as separate units.
- * All straight ladders must be held or lashed at the top when used and not left in unsafe condition when not in use.
- * A straight ladder should be placed with the bottom being one fourth the ladder length, horizontally, from the object against which it is leaning.
- * Do not stand on the top three rungs of a straight ladder.
- * Step ladders must be locked open to use.
- * Do not stand on the top two treads of a step ladder.
- * Step ladder over 12 feet high must be held or lashed at the top.
- * Do not use ladder with defective components.
- * Use both hands when climbing straight ladders and hold on with one hand when working on straight ladders.
- * If two hands are required for work on straight ladders you must be protected with an approved safety belt and lanyard connected to a sturdy structure.
- * Do not use ladders horizontally as scaffolds.

- * When required to use a ladder by a door, insure that the door can't be opened or that the area is roped off.
- * Only one person at a time shall be permitted on a ladder.
- * Insure ladder footing is solid and level.
- * Defective ladders must immediately be taken out of service, tagged and repaired or destroyed. They must not leave the plant, except for repair.

FIRE PREVENTION

- * Grease, oil, and other flammable materials must be cleaned up immediately.
- * Gasoline must be stored and carried in an approved safety can with flame arrester.
- * An area exposed to burning or welding slag must be cleared of combustible and flammable materials.
- * Never pour oil or gasoline into a drain.
- * All employees should be familiar with the exact location and method of use of all fire extinguishers in their areas.
- * Fire extinguishers must never be removed from their location or discharged except for use on fires.
- * When any fire extinguisher has been used, notify your Supervisor.
- * Fire extinguishers must not be relocated without the knowledge and consent of the Safety Director.
- * Always keep fire extinguishers free of obstructions.
- * All flammable and combustible liquids shall be stored in clearly labelled containers and designated areas.

LIFTING

- * Inspect the object you are about to lift for sharp corners, nails, or other things that may cause injury.
- * Crouch as close to the load as possible. Do not get into a full squat, but bend your legs.

- * Keep your back straight, but bend at the hips so you are over the load. Lift with your leg muscles and not with your weaker back muscles.
- * Get a firm grip on the object, straighten your legs and swing your back into a vertical position.
- * When setting objects down, reverse the procedures, making sure the leg muscles and not the back muscles do the work.
- * Get help lifting awkward or heavy materials.
- * If special trucks, racks, hoists, or other devices are provided, use them. They are there to prevent injuries as well as to make work easier and faster.

MOBILE EQUIPMENT

- * The speed limit for all vehicles is 10 mph or lower near pedestrians, obstructions or poor visibility.
- * All mobile equipment must be inspected once per shift prior to use by each operator. A record of the inspection should be made.
- * Lifting forks must be lowered within 6 inches of the ground during travel.
- * If an operator is out of sight of, or more than 25 feet from, his equipment, it must be shut off.
- * Riders are not allowed if no seat has been provided.
- * Never put your arm through the hoist mast.
- * When riding the bed of any size truck, you must be seated on the bed and the truck must have side boards in place and tail gate up.

PERSONAL PROTECTIVE EQUIPMENT

- * An approved hardhat shall be worn in all production areas.
- * Industrial safety glasses with approved shields must be worn in all production areas.
- * When exposed to chemical hazards, chemical splash goggles must be worn in lieu of safety glasses.

- * When exposed to chemical splashing, hot slag spray or molten lead splash, a face shield mounted on an approved hardhat assembly must be worn and lowered in place.
- * When exposed to hot slag spray or molten lead splash, fire retardant coveralls must be worn.
- * When required to handle hot, rough or sharp materials, cotton gloves must be worn.
- * When exposed to corrosive chemicals, rubber gloves must be worn. Handling wet batteries also requires rubber forearm sleeves.
- * When using a torch for heating or working near arc welding, light green tinted safety glasses must be worn.
- * When using a torch for burning, medium green cup or welder goggles must be worn.
- * When arc welding or observing, a full face shield with dark green tinted lens must be used.
- * When exposed to burning or welding slag, leather welding gloves should be worn.
- * All employees regularly entering or working in production areas must wear shoes or boots with safety toes and metatarsal guards. Other employees must wear shoes with, at least, safety toes.
- * Footwear exposed to strong acids, alkalydes or caustics must be made of rubber and be at least 12 inches high.
- * When performing extremely dirty work or entering the bag house, a disposable hood and coveralls must be worn.
- * Hearing protection must be worn in all posted areas and when using or working near a jackhammer or air compressor.
- * Respiratory protection is discussed in the Industrial Hygiene Practices section.

INDUSTRIAL HYGIENE PRACTICES

At the facility, the primary industrial hygiene hazard is lead contaminated air and surfaces. Other hazards include, sulfuric acid, heat stress, noise, vibration, and ergonomic-related hazards (improperly designed tools, work areas, or work practices). The following hygiene practices will protect the worker from known industrial hygiene hazards.

GENERAL

- * All personnel working in a production area or otherwise subject to visible contamination with hazardous materials shall wear a company furnished uniform and approved foot wear.
- * See Personal Protection Equipment section of Safety Practices for other skin and eye protection.
- * All personnel required to handle hazardous materials shall have access to and understand relevant information contained in the MATERIAL SAFETY DATA SHEET (MSDS) for that material. MSDS will be discussed during classroom sessions.
- * All personnel working in the production area or areas otherwise contaminated with hazardous materials shall take the following precautions in the order listed below before leaving the plant:
 - ** Remove all contaminated clothing, footwear and equipment.
 - ** Bundle trousers with shirt.
 - ** Place all reusable equipment, clothing, and footwear in bottom part of locker.
 - ** Take a shower using soap and hot water from head to foot. Shampoo hair during each shower regardless of head covering worn during the work period. Braided hair shall be unbraided for acceptable shampooing.
 - ** Dress in uncontaminated underwear, socks, street clothing, and shoes.
 - ** Do not re-enter production or other contaminated areas without Supervisory permission.

****** Leaving the plant for lunch is strongly discouraged for all production personnel. If you leave, the above procedures must be followed.

- * No one shall leave the plant in work uniform, work shoes or boots, or with contaminated equipment or supplies unless in a company vehicle for a work related task or during an emergency.
- * No one shall enter his vehicle with contaminated work uniform, foot wear or equipment or without having complied with the above decontamination procedures.
- * Visitors and facility personnel walking through a production area for the purpose of observation, inspection, or thoroughfare and who avoid direct contact with hazardous materials shall be exempt from the above decontamination procedures.
- * The consumption of alcoholic beverages while at work, reporting for work intoxicated, or the willful consumption of lead contaminant, or other toxic material or alcoholic beverages at any time shall be grounds for immediate termination.
- * To prevent absorption of lead through the skin, gasoline shall not be exposed to the skin or used as a cleaning/degreasing solvent.

RESPIRATORY PROTECTION

- * Approved respiratory protection shall be worn in all production areas unless specifically excluded in writing. Normally excluded areas are the hygiene facilities, main offices, and in the guard station.
- * Each time a respirator is used, the user shall inspect it for obvious damage and contamination.
- * The respirator shall fit snugly by proper adjustment of head and neck straps. Single strap respirators are not permitted. Straps shall not be worn together. One strap shall be worn above the ear and one strap below the ear. The upper strap may be worn over the hard hat.
- * If a disposable respirator is used, the nose bridge reinforcement shall be shaped for a snug fit.

- * At the start of each work period and anytime after a respirator has been completely removed, a fit and function check shall be made using the following technique:
 - ** Inhale forcefully while blocking air passage to filter cartridges with hands. A vacuum shall form with no air entering at the face seal or inhalation valve, if the exhalation valve is functioning.
 - ** Exhale while blocking the exhalation valve. The mask should lift away from the face if the inhalation valves are functioning.
 - ** Disposable respirators shall be checked for typical air passage resistance by forceful inhalation and exhalation.
 - ** If results are not acceptable, check for obvious defects and poor fit. If no defect is discovered, seek assistance from Supervisor.
- * If air passage resistance through filter cartridges begins to increase significantly, trade for fresh filter cartridges.
- * Disposable respirators shall be reused by the same person until they become soiled on the inside or no longer maintain their shape.
- * Respirators should be wiped clean by the user during a work period as often as conditions dictate.
- * All respirators shall be returned daily to the depository at the completion of the work period. Failure to conform to proper recycling will result in payroll deduction for the cost of the item.
- * Where a positive seal is part of the respirator design, no facial hair shall be permitted. Non-obstructive hair such as a reasonable mustache is permitted. The Safety Department shall be the final authority on acceptable facial hair.
- * Chewing gum, tobacco or other food while using a respirator is prohibited.
- * Smoking is permitted only in the break rooms, main office, office annex, and other offices regularly cleaned.

INGESTION

- * The consumption of food and beverage is restricted to the main break room, main office and office annex.
- * Smoking and chewing materials shall not be carried in a work uniform or into production areas.
- * Fingernails shall be kept trim and clean. Chewing fingernails is prohibited.
- * All personnel working in a production area or otherwise contaminated with lead, shall prepare for entering the hygiene facilities or the main office (i.e., clean areas) by performing the following steps in each occasion:
 - ** Remove all loose dirt from head to foot with vacuum device.
 - ** Hang up jackets, protective equipment and any other easily removable soiled items.
 - ** Roll up shirt sleeves past elbow.
 - ** Wash hands, face and neck with soap and water.
 - ** Using scrub brush, soap and water, scrub front and back of hands - paying particular attention to fingernails.
 - ** Keep sleeves rolled up until leaving the clean area.

DERMATOSIS (Skin)

Physical

- * Hot mill gloves shall be worn anytime manual work is being performed unless a more specialized glove is required or a specific task can only be performed with bare hands.
- * Leather gloves shall be used during all welding and oxy-acetylene cutting operations.
- * Fire retardant clothing is available to be worn when working near a furnace, refining kettle, welding, oxy-acetylene cutting, or anytime exposure to molten metal is possible. (Caution - some fire retardant clothing is not compatible with battery acid.)

- * Coveralls shall be worn when exposure to molten lead splash or spray is probable.
- * Double hot mill gloves shall be worn anytime the oxygen lance system is being used or repaired.

Chemical

- * Rubber gloves, sleeves, apron, boots, and face shield shall be worn when handling batteries. The rubber gear shall be washed by the user with water and set up to dry.
- * Rubber gloves and chemical splash goggles shall be worn when using concentrated cleaning solvents, degreasing solvents, strong acids and bases and other hazardous materials per the Material Safety Data Sheets (MSDS). Sleeves, apron, boots, face shield, or full suit may be required depending on exposure and toxicity.
- * Light rubber gloves shall be used for prolonged exposure to mild cleaning solution and other mild irritants.

Bacteriological

- * Barrier cream and rubber gloves shall be used when working with sanitary sewer system (except new work).

HEARING LOSS

- * Hearing protection shall be worn when:
 - ** Required by posted signs,
 - ** Near operating compressors or jackhammers,
 - ** Requested by a supervisor,
 - ** And any other time when noise level is high enough to require shouting at close proximity in order to communicate.
- * Annual hearing (audiometric) tests shall be provided to monitor for possible hearing loss. If a significant hearing loss is detected, upon the physician's recommendation, an employee may be transferred to a job with less noise exposure as a preventative measure.

HEAT STRESS

The risk of heat exhaustion and heat stroke shall be reduced by the following:

- * Employees with medical heat stress restrictions from a physician shall not be assigned or promoted to a job which involves heat stress exposure.
- * Water shall be consumed regularly to replace perspiration loss.
- * Electrolyte shall be made available in tablets or drink form to replace perspiration loss. Consumption shall not exceed recommended quantity.

CONTINGENCY PLAN

GENERAL

A contingency plan is required by state and federal law in order to minimize hazards to human health and the environment from an unplanned sudden or non-sudden release of hazardous waste to the air, soil, or surface water. The plan is designed to cover only the permitted operating unit, the container storage area. Whenever a release of hazardous waste to the environment occurs or is imminent, the emergency coordinator will be contacted immediately by plant employees and he will determine if the contingency plan will be carried out. Any situation involving hazardous material which is out of control for more than ten minutes is considered an emergency requiring implementation of the plan.

The procedure which the emergency coordinator will follow to implement the contingency plan is detailed in the section of the plan entitled "Emergency Procedures".

Arrangements have been made with the police and fire departments to acquaint them with the facility's operations with respect to potential hazards, worker locations, entrances, on-site roads, and possible evacuation routes. An agreement has been made with the local ambulance service to provide emergency medical support to the plant site. Arrangements with the local hospital to acquaint their staff with the nature of possible injuries or illnesses peculiar to handling the materials managed at the facility have been made.

Potential emergencies at the facility which might arise are limited in nature. The type of emergencies which could occur, in the container storage area, are limited to injury to personnel or a releases of hazardous waste to the environment. The potential for fire or explosion in this area is virtually non-existent. The contingency plan addresses these types of emergencies and specific actions which are to be taken by plant employees in the event they occur.

EMERGENCY COORDINATOR

The facility has set-up a emergency coordinator and a emergency response team. The emergency coordinator is either on-site or on call at all times and has the responsibility and authority to coordinate any emergency response measures necessary.

The emergency coordinator and response team are thoroughly familiar with all aspects of the contingency plan, all operations and activities of the plan, the location and characteristics of waste handled, the location of all hazardous records, and the layout of the facility.

IMPLEMENTATION OF THE CONTINGENCY PLAN

The decision to implement the contingency plan depends upon whether or not an imminent or actual incident could threaten human health or the environment. This section provides guidance to the emergency coordinator in making this decision by providing implementation criteria.

The contingency plan will be implemented in the following situations:

1. Injury to employee - When the injury is of a serious enough nature such that medical attention above the level of first-aid is required.
2. Spills or material release - When the spill could cause the release of toxic and/or corrosive liquid to the environment as follows:
 - * The spill can be contained on-site, but the potential exists for groundwater contamination; or,

- * The spill cannot be contained on-site resulting in the off-site soil contamination and/or ground or surface water contamination.

EVACUATION PLAN

In the event of an emergency requiring the evacuation of the facility, the routes to be taken are shown in Figure 1 located at the end of this booklet. All employees will exit the main gate adjacent to the office and assemble in the parking lot.

EMERGENCY RESPONSE PROCEDURES

Notification

In the event of an emergency situation the emergency coordinator will be notified first. Subsequently, all appropriate plant personnel, appropriate federal, state, or local agencies, and appropriate emergency response services will be notified.

Identification of Hazardous Wastes

The emergency coordinator will immediately identify the nature, source, amount and area of the release. The initial identification method will be to utilize visual analysis of the material and the location of the release.

Assessment

The emergency coordinator will assess possible hazards, both direct and indirect, to human health or the environment.

EMERGENCY PROCEDURES

The emergency procedures which will be followed by the emergency coordinator in implementing the contingency plan are detailed below.

1. In the event of major emergencies, notify all plant employees of the situation. Evacuate employees if deemed necessary. For general emergency situations verbally alert employees in the area of the emergency.
2. Contact state and local agencies with designated response roles if their assistance is required.

3. Whenever there is a release, fire, or explosion, the emergency coordinator will immediately identify the character, exact source, amount, and the extent of any released materials. He will do this by observation or review of facility records or manifests and, if necessary, by chemical analysis.
4. Concurrently the emergency coordinator will assess possible hazardous to human health or the environment that may result from a release, fire or explosion. This assessment will consider both direct and indirect effects of a release, fire explosion (e.g., the effects of any toxic, irritating, or asphyxiating gases that are generated, or the effects of any hazardous surface run-off from water or chemical agents used to control fire and heat-induced explosions).
5. If the emergency coordinator determines that the facility has had a release, fire or explosion which could threaten human health, or the environment, outside the plant, he will report his findings as follows:
 - (a) If his assessment indicates that evacuation of local areas may be advisable, he will immediately notify local authorities. He will be available to help appropriate officials decide whether local areas should be evacuated; and
 - (b) He will immediately notify the government official designated as the on-scene coordinator for the geographical area or the National Response Center, and the Tennessee Department of Health and Environment. If the release is a spill, the U.S. Coast Guard will be notified. These reports will include:
 - (i) Name and telephone number of reporter;
 - (ii) Name and address and EPA identification number (IND000718130) of the plant;
 - (iii) Time, date, location and type of incident;
 - (iv) Name and quantity of material(s) involved, to extent known;

(v) The possible hazards to human health of the environment outside the plant.

6. During an emergency, the emergency coordinator will take all reasonable measures necessary to ensure that releases, fires, and explosions do not occur, recur, or spread to other hazardous waste material at the facility. These measures will include, where applicable, stopping processes and operations, collecting and containing released waste, and removing or isolating containers.
7. If the plant stops operations in response to a release, fire, or explosion, the emergency coordinator will monitor the leaks, pressure build-up, gas generation, or ruptures in valves, piping, or other equipment, wherever this is appropriate.
8. Immediately after an emergency, the emergency coordinator will provide for treating, storing, or disposing of recovered waste, contaminated soil or surface water, or any other material that results from release, fire or explosion at the facility.
9. The emergency coordinator will ensure that, in the affected area(s) of the facility:
 - (a) No waste that may be incompatible with the release material is treated, stored, or disposed of until procedures are completed; and
 - (b) All emergency equipment listed in the contingency plan is cleaned and fit for its intended use before operations are resumed.
10. The facility will notify the Indiana Department of Environmental Management and any other appropriate state and local authorities, that the plant is in compliance with No. 9 in this Section before operations are resumed in the affected area(s) of the facility.
11. The facility will note in the operating record the time, date, and details of any incident that requires implementing the contingency plan.
12. Within 15 days after the incident, a written report will be submitted to the Indiana Department of Environmental Management which includes the following:

- (a) Name, address, telephone number and EPA identification number (IND000718130) of the facility;
- (b) Date, time, location and type of incident;
- (c) Name and quantity of material(s) involved;
- (d) The extent of injuries, if any;
- (e) An assessment of actual or potential hazards to human health or the environment, where applicable; and
- (f) Estimated quantity and disposition of recovered material that resulted from the incident.

13. If the release is a spill, a Hazardous Waste Spill Report will be submitted within 15 days of the incident to the Indiana Department Environmental Management. This report will contain the information specified in No. 12 of this Section, plus the following items:

- (a) A brief description of the circumstances causing the spill;
- (b) Waste Code Number and composition by chemical content and percent of principal components and contaminants present by weight;
- (c) Process producing the waste;
- (d) A description of the actions the generator has taken by the time of the report to contain, clean-up and dispose of the spilled hazardous wastes; and
- (e) A description of what further actions the generator intends to take to ensure that spilled waste no longer can present a hazard to human health and the environment.

INJURY PROCEDURES

1. When an employee or visitor becomes ill or injured at the facility, it is the Supervisors responsibility to handle the situation.

- * Each Supervisor is required to be knowledgeable of the procedures in case of an emergency.
 - * The Supervisor shall determine if the individual requires first aid by the facility or whether emergency help be summoned.
2. First aid administered by the facility shall be administered by individuals trained for the particular injury or illness.
 3. Arrange for professional evaluation or assistance when more than first aid is required.
 4. Arrange for transportation if immediate medical assistance is required.
 5. In case of an emergency, all employees shall listen for signals for evacuation. If an emergency situation has occurred, notify your Supervisor immediately.
 6. Serious injury, illness or emergency situation shall be reported to the following as soon as possible.

Ron Widner. Plant Manager

7. Call List

TELEPHONE DIRECTORY OF EMERGENCY SUPPORT SERVICES

POISON INFORMATION CENTER	1-800-292-6678
AMBULANCE (*)	787-3311
LOCAL DOCTOR - Dr. Jones	787-3311
SAINT FRANCIS HOSPITAL (*)	787-3311
BEECH GROVE POLICE DEPARTMENT (*)	782-4949
MARION COUNTY SHERIFF'S DEPARTMENT	633-5181
INDIANA HIGHWAY PATROL	232-5533
ENVIRONMENTAL PROTECTION AGENCY (Emergency Branch)	1-312-353-2000
INDIANA DEPARTMENT OF ENVIRONMENTAL MANAGEMENT	1-232-3220
UNITED STATES CORP OF ENGINEERS	549-5003
NATIONAL RESPONSE CENTER	1-800-424-8802

Also use the 911 Emergency Number

REFINED METALS EPA I.D. NUMBER: IND000718130

TRAINING PROGRAM

All employees are required to take specific job related training based on individual job descriptions and must successfully complete a training program of class room instructions and/or on-the-job training. Training is given within 6 months of the initial employment or after a position change and is updated annually. Training records are kept for each employee in the employee's file.

Federal Requirements

The Occupational Safety and Health Administration (OSHA) Hazardous Communication Standard and the Resource Conservation and Recovery Act (RCRA) Hazardous and Solid Waste Regulations require the facility to train their employees on the hazards that may be encountered on the job including emergency response procedures. The training should include protective measures to minimize the potential of these hazards. The required training is listed below:

- * An explanation of the OSHA and RCRA standards and how these standards operate at the facility.
- * Instructions on how to read and interpret container labels and Material Safety Data Sheets (MSDS).
- * Information on the Hazardous Communication Standard and how the employees can obtain available information.
- * Education on the physical and health hazards associated with the chemicals and hazardous chemicals at the facility.
- * Measures that employees can take to protect themselves from hazards.
- * An explanation of safety rules and practices that the facility has implemented such as safe work practices, emergency procedures, and use of personal protective equipment.
- * Ensure that all employees are familiar with the Contingency Plan, emergency procedures, and the location and proper use of all emergency equipment.

Training Elements

The facility has developed a training program designed around secondary lead smelter operations. This program is designed to familiarize the employee with potential physical and health hazards as well as emergency response procedures.

The following is a list of training elements presented to employees. (Additional sessions may be added by the facility to protect the employee in other work related activities.) Appendix A contains handouts for the training elements listed below.

* Blood Lead Monitoring

Employees will be tested for blood lead content at the time of employment and on a monthly basis thereafter. The blood lead content will be monitored by the facility to keep the employee's blood lead content below the maximum allowable concentration. Employees with blood lead levels exceeding the maximum allowable concentration will be transferred to a job that will reduce the employee's exposure to lead. All employees will be educated about the hazards associated with high blood lead levels.

* Respiratory Equipment

Employees will be trained on the proper use of protective respiratory equipment. Employees using respiratory equipment will be fit-tested to assure the proper fit for the equipment. Employees will be trained on how and when to replace spent cartridges. Employees will be educated on the proper way to maintain their respirators for maximum efficiency.

* OSHA Hazard Communication Standard (Worker's Right-to-Know)

The Hazard Communication Standard is intended to give employees who work with hazardous chemicals access to information about the chemicals with which they work. Chemical manufacture's are required to assess hazards and develop labels and Material Safety Data Sheets (MSDS) which are forwarded to the facility. The facility is required to inform the employees about the hazards associated with working with these chemicals. The facility is required to teach employees how to interpret labels and supply them with access to Material Safety Data Sheets for each chemical used at the facility. The facility is required to educate employees about physical and health hazards associated with chemicals in the workplace. Physical hazards include chemicals that are combustible liquids, compressed gases, flammable, oxidizers, or water reactive wastes which are associated with this secondary lead smelting facility. Health hazards include chemicals that are carcinogenic, toxic, irritant or corrosive.

* How to Read and Interpret Container Labels

Employees will be trained to read and interpret labels on chemical containers used or stored at the facility. This training will assist the employee in determining what physical and chemical hazards are associated with an individual container.

* How to Read and Interpret Material Safety Data Sheets (MSDS)

Employees will be trained to read and interpret Material Safety Data Sheets (MSDS) for all chemicals used or stored at the facility. An MSDS is available for each chemical or mixture used or stored at the facility. MSDSs can help identify physical and health hazards of chemicals used at the facility. The MSDS contains important information associated with the chemical mixture including the manufacturer's name address, and emergency phone number(s).

* Proper Industrial Hygiene Practices

Employees will be trained in the proper industrial hygiene practices associated with the secondary lead smelting industry. Employees are educated on proper cleaning procedures to eliminate the physical and health hazards associated with secondary lead smelting.

* Contingency Plan

Employees will be trained to respond effectively to emergencies by familiarizing themselves with the emergency procedures as outlined in the contingency plan, emergency equipment, and how to determine hazardous or emergency conditions. Employees will be educated in the proper usage and location of emergency equipment located at the facility. Training will include the proper emergency response actions as specified in the Contingency Plan. Employees will be trained to determine if an emergency condition is present.

* Management of the Container Storage Area

Employees that work in or around the container storage area will be trained in the proper maintenance of the area and emergency response. The training includes the proper handling method for batteries and drums stored in the area. Employees will be trained in the proper response to spills associated with the area including

the proper procedures necessary to eliminate off-site contamination.

Job Descriptions

Job descriptions for employees at the facility are located in Appendix B. The job descriptions contain requirements associated with the positions at the facility. The descriptions include a job title, functions, technical requirements, training, and duties and responsibilities.

ANNUAL
TRAINING AND HEARING CONSERVATION
PROGRAM

I, _____, HAVE BEEN INSTRUCTED AND/OR
COUNSELLED IN REGARDS TO THE REFINED METALS CORP, HEARING
CONSERVATION PROGRAM. I UNDERSTAND THE AREARS WHERE PROTECTION
IS TO BE WORN, THE TYPE OF PROTECTION AVILABLE, HOW TO FIT
THE HEARING PROTECTION DEVICES AND PROPER CARE OF DEVICES.
I RECEIVED A AUDIOGRAM TEST AT THE TIME OF MY PRE-EMPLOYMENT/ OR
ANNUAL PHYSICAL EXAMINATION. AND UNDERSTAND THAT I WILL RECEIVE
AND AUDIOGRAM TEST AT EACH ANNUAL PHYSICAL EXAMINATION.

SIGNED. _____
DATE

WITNESS: _____

THE PRIMARY PURPOSE FOR IMPLEMENTING AN EFFECTIVE HEARING CONSERVATION PROGRAM (HCP) IS TO PREVENT SIGNIFICANT PERMANENT NOISE INDUCED HEARING LOSS RESULTING FROM ON-THE-JOB NOISE EXPOSURES.

THE EFFECTS OF NOISE ON HEARING:

IT HAS BEEN CLEARLY ESTABLISHED THAT HABITUAL EXPOSURES TO NOISE LEVELS IN EXCESS OF 90dBA WILL CAUSE SIGNIFICANT HEARING LOSS IN A SIZABLE PORTION OF THE EXPOSED POPULATION. ADDITIONALLY THERE ARE AMPLE DATA TO SUGGEST THAT LEVELS OF 85dBA OR EVEN 75dBA WILL BE INJURIOUS TO SOME.

THE PURPOSE OF HEARING PROTECTION:

HEARING PROTECTION DEVICES (HPD) REDUCE USER SOUND EXPOSURES WHEN WORN PROPERLY.

ADVANTAGES:

THE TYPICAL PROTECTED EMPLOYEE EXPERIENCES LESS FATIGUE FEWER ON-THE-JOB INJURIES LESS EMOTIONAL STRAIN AS A RESULT OF COMMUNICATION DIFFICULTIES ENCOUNTERED ON OR OFF THE JOB.

DISADVANTAGES :

(HPD) HEARING PROTECTION DEVICES REDUCE USERS SOUND EXPOSURES WHEN PROPERLY WORN. THIS MEANS THAT ALL SOUNDS MAY BE ATTENUATED, BOTH WANTED AND UN-WANTED SOUNDS (NOISE) AND USEFUL SOUNDS SUCH AS SPEECH AND WARNING SIGNALS.

THE PURPOSE OF AUDIOMETRIC TESTING:

THE OVERALL PURPOSE OF ALL AUDIOMETRIC EXAMINATIONS IS THE EFFECTIVE PRACTICE OF PREVENTIVE, AS OPPOSED TO CLINICAL MEDICINE. IF WE KNOW THE STATUS OF AN INDIVIDUALS HEARING WHEN HE OR SHE BEGINS WORKING IN A POTENTIALLY NOISE HAZARDOUS ENVIRONMENT, WE CAN IN THEORY IDENTIFY AND CHANGE OR LOSSES BY MEANS OF SEQUENTIAL MONITORING.

AREAS IN PLANT WHERE (HPD) MUST BE WORN:

ALL PEOPLE WORKING IN BATTERY BREAKER

ALL PEOPLE WORKING ON CASTING MACHINE

ALL FURNACE FEEDERS OPERATION OF END LOADER

BEAR

E-A-R® Plugs

The custom-fit solution.

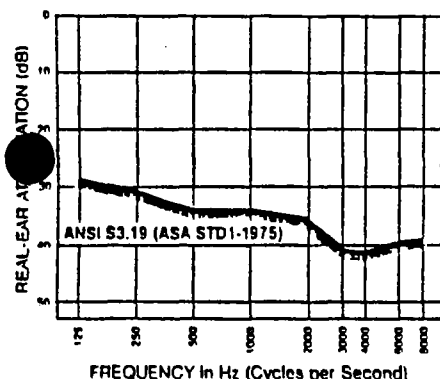
The secret of performance for E-A-R Plugs is an exclusive, soft, energy-absorbing polymer foam developed and manufactured by E-A-R Division, Cabot Corporation.

The foam allows the Plug to gradually expand and conform exactly to the size and shape of virtually any ear canal. The result is a true custom fitting earplug that gently seals the ear canal to provide maximum hearing protection and all-day comfort.

The proof.

When tested according to American National Standards Institute methods, E-A-R Plugs demonstrate consistently high attenuation values and low variability.

Attenuation data



ANSI S3.19-1974 (ASA STD1-1975)

Frequency Cycles/Second	125	250	500	1000	2000	3000	4000	6000	8000
Real Ear Attenuation (dB)	29.6	31.3	34.1	34.0	35.5	40.8	41.9	39.9	39.3
Standard Deviation	3.2	3.3	2.1	2.3	2.7	1.8	2.1	2.0	2.8

The extra benefits.

Non-allergenic.

Continuing regular independent testing of production lots ensure that E-A-R Plugs are non-irritating and dermatologically safe.

Wash 'n Wear.

E-A-R Plugs can be washed for re-use at least ten times before affecting attenuation properties.

The easy sure-fit.

For maximum effectiveness, E-A-R Plugs must be properly inserted and worn. Hands and Plugs should be clean prior to use.



Uncompressed Plug.



1. Slowly roll and compress the Plug into a very thin, crease-free cylinder. (Do not worry about hurting the Plug - it is designed to be tightly compressed.)



2. While compressed, insert the Plug well into the ear canal. Fitting the Plug is easier if the outer ear is pulled outwards and upwards during insertion.
3. With fingertip, hold the Plug in place until it begins to expand and block the noise.



Proper insertion.



Improper insertion.

Quality of fit may be estimated by observation, as illustrated above. Additionally, earplug fit can be tested in the presence of noise by alternately covering and uncovering the ears with tightly pressed hands. With properly fitted plugs the noise levels should seem nearly the same whether or not the ears are covered.

Your E-A-R source.

If you have any questions or require any additional information about E-A-R Plugs, contact: E-A-R Division, Cabot Corporation.

BEAR division
cabot corporation
7911 zionsville road • Indianapolis, Indiana 46268
telephone (317) 872-1111 twx: 810-341-3412

Wait 'til you hear what's next.

SECONDARY LEAD SMELTERS

ANNUAL TRAINING PROGRAM

I, _____, HAVE BEEN FULLY INSTRUCTED AND/OR COUNSELLED IN REGARDS TO BEING EMPLOYED IN THE LEAD SMELTING INDUSTRY IN REGARDS TO HEALTH, SAFETY AND PERSONNAL HYGIENE, I FULLY REALIZE THAT I WILL BE EXPOSED TO A POTENTIALLY HAZARDOUS MATERIAL, NAMELY LEAD. I HAVE ALSO RECEIVED A COPY OF REFINED METALS CORP. LEAD HYGIENE PROGRAM. I AM OBLIGATED TO READ AND FULLY UNDERSTAND THE REQUIREMENTS OF THIS PROGRAM, AND ALL SAFETY AND HYGIENE POLICIES AND PROCEDURES POSTED ON THE EMPLOYEE BULLETIN BOARDS.

I UNDERSTAND I AM TO ASK MY SUPERVISOR FOR CLARIFICATION ON AREAS THAT ARE NOT COMPLETELY CLEAR TO ME..

SIGNED: _____
DATE

WITNESS: _____

THE CONTENT OF THE STANDARD AND ITS APPENDICES;

1. APPENDIX A, WHICH IS ENTITLED "SUBSTANCE DATA SHEET FOR OCCUPATIONAL EXPOSURE TO LEAD, CONTAINS SECTIONS ON SUBSTANCE IDENTIFICATION" AND HEALTH HAZARD DATA."
 - 1A. "THE SUBSTANCE IDENTIFICATION" SECTION BRIEFLY DESCRIBES LEAD AND CHEMICAL PROPERTIES: THE FACT THAT THE NEW LEAD STANDARD COVERS EXPOSURE TO ELEMENTAL LEAD AND INORGANIC LEAD COMPOUNDS, BUT NOT ORGANIC COMPOUNDS WITH THE EXCEPTION OF LEAD SOAPS: MAJOR USES OF LEAD: AND THE PERMISSIBLE EXPOSURE LIMIT (PEL) AND ACTION LEVEL OF 50ug/m³ and 30 ug/m³, RESPECTIVELY, BASED ON AN AVERAGE 8-HOUR WORKING DAY EXPOSURE.
 - 1B. THE SECOND ENTITLED "HEALTH HAZARD DATA" CONTAINS TWO SECTIONS. ONE SECTION POINTS OUT THAT LEAD CAN ENTER THE BODY THROUGH EITHER BREATHING OR EATING LEAD AND THAT LEAD WILL BUILD UP IN THE BODY IF THE INTAKE IS GREATER THAN THE OUTPUT OF LEAD IN THE URINE OR FECES.
 - 1C. THE SECOND SECTIONS CONSISTS OF FOUR SUBSECTIONS AND PRESENTS OSHA'S VIEWS ON THE HEALTH EFFECTS OF OVER-EXPOSURE TO LEAD. OSHA'S OPINION ON THE LEVELS OF LEAD IN THE BLOOD ASSOCIATED WITH VARIOUS HEALTH EFFECTS: AND OSHA'S ADVICE ON REPORTING ANY SIGNS OR SYMPTOMS OF HEALTH PROBLEMS.
2. APPENDIX B, WHICH IS ENTITLED "EMPLOYEE STANDARD SUMMARY". CONTAINS 15 SECTIONS SUMMARIZING THE CONTENTS OF THE LEAD STANDARD.
 - 2A. THIS APPENDIX DESCRIBES EACH REQUIREMENT OF THE STANDARD, NOTING THOSE SECTIONS WHICH ARE IN FORCE, THOSE WHICH TAKE EFFECT LATER AND THOSE WHICH ARE PRESENTLY STAYED BY THE U.S. COURT OF APPEALS PENDING A DECISION ON THE VALIDITY OF THE ENTIRE STANDARD.

A COPY OF THE STANDARD IS AVAILABLE TO ALL
AFFECTED EMPLOYEES

RE-INSTRUCTION PROGRAM

SECONDARY LEAD SMELTERS

- A. You were issued a copy of the lead standard and its appendices; A,B,C. at your plant orientation meeting you must read and understand these standards, If questions arise see your supervisor.
- B. The specific nature of our operation at this plant is a secondary lead smelter and could expose you to lead above the action level of 30ug/M3 over a 8 hr. time weighted average. The permissible exposure limit (PEL) is 50 micrograms of lead per cubic meter of air 50 ug/M3 average over an 8-hour work day.
- C. The purpose of respirators are to reduce your exposure to lead dust, fumes and mist.
 - C-a We have selected the MSA masks as being the very best for your protection and our operation.
 - C-b You were given a smoke test to assure proper fit and seal of your own personal respirator, If you feel at any time that your respirator is not sealing or fitting properly it is your obligation to request and receive another fitting.
 - C-c Your respirator is not a gas mask and should not be used as such. For proper respirator use in all areas of the plant check with your supervisor.
- D. The purpose of the medical surveillance program is to insure that your blood lead level stays in the acceptable range for working in this industry. Blood lead testing is the only approved method of checking for lead in your system, if test should show above acceptable limits you will be removed to a low lead or no lead area until your blood lead is reduced to an acceptable level. Excessive exposure to lead can cause adverse reproduction effects in both male and females.
- E. Your work practices must follow instructions given at orientation with emphasis on using the hygiene facilities properly. Washing of hands and face, upper arms, rinsing of mouth, not biting finger nails, no mixing of street clothing with plant clothing or back tracking into street or plant locker rooms after changing for work or going home. And you must take a complete shower after work including washing of your hair.
- F. Chelating agents should not routinely be used to remove lead from your body and should not be used at all except under the direction of a licensed physician.
- G. A copy of the lead standard is available on request by writing to

Bureau of Records
U. S. Dept of Labor
Occupational Safety & Health Administration
Washington, D.C. 20210

SAFETY & HYGIENE

1. Do not brush or blow dust from clothing use vacuum system.
2. Do not smoke or drink in areas outside of lunch room.
3. Do not enter into street locker rooms or lunch room without shoe covering and smock covering your work clothing
4. Do not bite finger nails, Or wipe hands on work clothing while eating.
5. Use plant locker as instructed, hat on hanger, respirator in plastic bag, on top shelf, gloves and shoes on lower shelf and door shut.
6. Back tracking into plant locker room and rest room after changing into street clothing, or going into street locker room after changing into plant clothing without covering shoes and uniform contaminates fellow workers, and creates a work hygiene hazard.
7. You are not to wear un-finished coats outside of your coveralls
8. Do not leave trash and garbage on tables and floor after you have finished breaks or lunch.
9. No smoking in locker rooms or rest rooms(lunch room only).....
10. Do not sit on table, or put feet on tables and chairs.
11. When working in the plant use proper respirator for job being performed. If not sure check with your supervisor.
12. Check respirator each time you remove and replace it for proper seal and fit.
13. Use air line respirator when entering into baghouse sections or working on lower or upper levels and be sure you are hooked into filter panel board.
14. Have safety man available when entering into baghouse sections.
15. Check all equipment for defects before using and safety. report any malfunctions to your supervisor.
16. Report all accidents to your supervisor personal and property no matter how small they may seem...

ANNUAL REVIEW TRAINING
HAZARDOUS MATERIAL COMMUNICATION SIC GROUP 33
265.16 29-CFR-1910-1200 (a)

I HAVE BEEN FULLY INSTRUCTED AND/OR
RE-INSTRUCTED, IN REGARDS TO THE
HAZARDOUS CHEMICALS USED IN THE DAILY
OPERATIONS OF REFINED METALS CORP.
I UNDERSTAND WHERE THEY ARE USED, THE
PROTECTION I AM TO WEAR, HOW TO RE-
COGNIZE SUBSTANCE AND TO REACT ACCOR-
DINGLY IF AND EMERGENCY SITUATION IS
NEEDED.

WITNESS: _____

SIGNATURE: _____

DATE: _____

HAZARDOUS MATERIALS COMMUNICATION ACT "RIGHT TO KNOW"

1. BECAME LAW MAY 25, 1986 AND IS A FEDERAL REGULATION.
2. THE PROGRAM WILL BE CARRIED OUT IN YOUR DEPARTMENT BY MEANS OF ACCESS TO MSDS (MATERIAL SAFETY DATA SHEETS) ALSO BY OBTAINING INSTRUCTIONS AND INFORMATION FROM YOUR SUPERVISOR OR SAFETY COORDINATOR. AND WILL BE UP-DATED AS CHANGES OCCURE.
3. YOU WILL FIND THE MSDS FOR CHEMICALS USED IN YOUR DEPARTMENT AND ALL DEPARTMENTS IN THE PLANT POSTED ON THE EMPLOYEES BULLETIN BOARD.
4. OUR OVERALL WRITTEN PROGRAM ON HAZARD EVALUATION PROCEDURES, AND LIST OF HAZARDOUS CHEMICALS AND WHERE THEY ARE USED ARE MAINTAINED BY THE PLANT MANAGER, PLANT SUPERINTENDENT AND SAFETY COORDINATOR. THESE ARE AVAILABLE TO YOU AT YOUR WRITTEN REQUEST.
5. HOW TO DETECT HAZARDOUS CHEMICALS IN YOUR WORK AREA.
 1. CHECK ALL LABELS ON: BARRELS, SACKS, CANS, ECT; THAT ARE BEING USED.
 2. YOUR SUPERVISOR WILL EXPLAIN OR SHOW YOU ANY DISTINCTIVE APPEARANCE OR SMELL OF A PARTICULAR CHEMICAL. THEN IN CASE OF A SPILL OR SOME OTHER EMERGENCY YOU SHOULD KNOW HOW TO RECOGNIZE SUBSTANCE AND REACT ACCORDINGLY.
6. HOW TO PROTECT YOURSELF WHILE WORKING WITH THESE CHEMICALS:
 1. YOU WERE INSTRUCTED AND ISSUED WRITTEN COPIES AT THE TIME OF YOUR EMPLOYMENT ORIENTATION ON ALL PHASES OF OUR PLANT OPERATIONS.
 2. YOU WERE ISSUED SAFETY EQUIPMENT AND PROPERLY INSTRUCTED AND FITTED ON ITS USE AND CARE. WHERE AND HOW TO USE THIS EQUIPMENT.
 3. AS PART OF YOUR CONTINUED EMPLOYMENT SAFETY EQUIPMENT MUST BE USED AS INSTRUCTED. ANY MALFUNCTION OR DEFECTS REPORTED TO YOUR SUPERVISOR IMMEDIATELY AND REPAIRS OR REPLACEMENT MADE BEFORE CONTINUED USE.

LIST OF CHEMICALS LOCATION AND
WHERE THEY ARE USED

REFINING: SELENIUM, RED PHOSPHORUS, CAUSTIC POT ASH
CAUSTIC SODIUM NITRATE, ARSENIC, SULFUR

SMELTING: LIME

B/BREAKER: SULFURIC ACID, MAGNESIUM HYDROXIDE OR LIQUID CAUSTIC SODA
25% in winter
50% in summer

OUR PRIMARY EMERGENCY AUTHORITY IS THE BEECH GROVE FIRE DEPARTMENT
UNDER THE DIRECTION OF MR. JAMES BRIGHT DEPUTY CHIEF PHONE NO.
784-4411

EMERGENCY SPILL CONTROL -- BATTERY BREAKER

DISCRIPTION:

THE PURPOSE IS TO CONTROL ANY ACID SPILL DUE TO TANK RUPTURE OR OVERFLOW FROM BREAKER, TO CONTAIN MATERIAL IN BUILDING AND TO ASSURE THAT NO CHEMICAL ESCAPES OUR PROPERTY.

RESPONSIBILITY:

THE LINE SUPERVISOR POSITION IS TO COORDINATE MANPOWER OF EXISTING PEOPLE TO ASSURE A QUICK AND EFFECENT SPILL CLEAN-UP CONTROL. TO TRAIN THE BATTERY BREAKER EMPLOYEES IN HANDLING AND THE PROPER CLEAN-UP PROCEEDURES.

CONTROL MATERIALS:

1. SAND, OR ACID ABSORBANT MATERIAL
2. ENDLOADER
3. SHOVELS
4. FIRE HOSE
5. CLEAN-UP MATERIAL TO BE PLACED IN MATERIAL BIN FOR DISPOSAL

PROTECTIVE EQUIPMENT:

1. ULTRA TWIN FULL FACE MSA RESPIRATOR WITH GMHC FILTERS
2. RUBBER BOOTS WITH METATARSAL GUARD
3. HARD HAT
4. 14" ROUGH PALM RUBBER GLOVES
5. SUPPLIED COVERALLS

OUTSIDE HELP:

IF SPILL SHOULD LEAVE OUR PROPERTY OR WE WOULD LOSE CONTROL CALL 782-4940 BEECH GROVE FIRE DEPARTMENT MR. JAMES BRIGHT THEY ARE OUR OUTSIDE HAZARDOUS CONTROL COORDINATOR AND CAN CONTACT A HAZARDOUS MATERIALS TEAM.

IF INJURIES SHOULD OCCURE NOTIFY ST. FRANCIS OCCUPATIONAL HEALTH CENTER MS. ELEANOR BOCHMAN THEY WILL COORDINATE CARE FOR MEDICAL EMERGENCY WITH HOSPITAL. CALL 782-3009

BOTH THE FIRE DEPARTMENT AND OCCUPATIONAL HEALTH CENTER HAVE ALL OUR MATERIAL SAFETY DATA SHEETS ON FILE.

Refined Metals Corporation

Beech Grove Plant

Narrative Descriptions

Sodium Hydroxide (50%) is a high risk irritant to eyes, skin and inhaling vapors, harmful and fatal if swallowed. This material is not flammable. If spill should occur, wet down with plenty of water or neutralize with weak acid and remove immediately. If law permits, flush to sewer observing local, state and federal health and safety regulations. Wear goggles, face shield, gloves protective clothing and footwear impervious to this material.

Sodium Nitrate used on site at Refined Metals Corp. is used Metallurgical as a flux, as an oxidizing agent. Is soluble in water. Extinguishing with CO₂, water, dry chemical or foam. It is a mild irritant to eyes and skin. If spill occurs, sweep or shovel up. Wear protective clothing when cleaning up and approved dust respirator, goggles, rubber gloves. Disposal, bury in sanitary landfill: according to local, state, and federal regulations.

Caustic Soda used on site at Refined Metals Corp. is used in the Metallurgical as a flux. It will react with water. It is a high risk irritant to skin and eyes and lungs. Material is not flammable. If spill should occur, neutralize with and dilute inorganic acid such as hydrochloric, sulfuric, nitric, phosphoric and acetic acid. Dispose of via approved chemical waste disposal method in accordance with local, state, federal regulations. Wear protective clothing, chemical splash goggles, and face shield, approved respirator for dust and mist, use air purifying respirator where caustic soda is in contact with reducing sugars.

Magnesium hydroxide is considered a very low risk irritant to eyes and/or people with very sensitive skin. It reacts with acids, but does so very slowly with little heat evolved as compared to sodium hydroxide. In the unlikely event of a fire, some liberation of magnesia fume is possible requiring respiratory protection. The only possible health risk would occur if the magnesium hydroxide should be spilled. The slippery nature of the substance may result in injuries from falling.

The sulfuric acid processed on site at Refined Metals Corp. presents no real hazard, either as an oxidizer or because it is water reactive. The electrolyte on hand is approximately 1.100 specific gravity or approximately 15% sulfuric acid in water. This concentration reduces the water reactivity to near zero and greatly reduces dangerous oxidation reactions. Should fire occur, acid fumes would demand the use of respirators and rubber boots, gloves, coats, and eye protection.

All of the lead compounds present are either elemental lead or inorganic lead compounds. Respiratory protection is required at all time.

JOB DESCRIPTION

Job Title: Baghouse Helper

Function: Perform all tasks requested by the baghouse operator including monitoring and minor maintenance on baghouse bags.

Technical Requirements: Must have average learning ability and must follow instructions of the baghouse operator.

Training: Training must include proper clean up procedures, OSHA Right-to-Know, blood lead monitoring, respiratory equipment, industrial hygiene practices, reading and interpreting labels and MSDS, and Contingency Plan.

Duties and Responsibilities:

- Must have average learning ability and aptitude to learn to operate the necessary job related equipment within the probationary period (3 months).
- Must follow instructions of the baghouse operator.
- Upon completion of the 3 month probationary period, the helper will be capable of performing repetitive operations under normal supervision.
- Must monitor and perform minor maintenance on baghouse equipment.
- Must assist baghouse operator in shaking baghouses and the replacing of bags.
- Must report any safety hazards to the supervisor immediately.
- Must abide by all safety rules.
- Must maintain good housekeeping in all work areas.

JOB DESCRIPTION

Job Title: Battery Handler

Function: The Battery Handler is responsible for removing the batteries from trucks and placing the batteries on the conveyer in the proper orientation to enter the saw. The Battery Handler is responsible for the battery breaking building good housekeeping duties.

Technical Requirements: Requires no specific knowledge on starting job. Must have average learning ability and aptitude for facility operations.

Training: On the job training provided by the Battery Breaker Operator. Training in proper clean-up procedures, employee must attend OSHA Right-to-Know, blood lead monitoring, respiratory equipment, proper industrial hygiene practices, and Contingency Plan.

Duties and Responsibilities:

- Must follow instructions from the battery breaker operator or plant supervisor.
- Upon completion of probationary period, the helper will be capable of performing repetitive operations under normal supervision.
- Must report any safety hazards to the supervisor immediately.
- Must abide by all safety rules.
- Must maintain good housekeeping in all work areas.
- Must clean up spills immediately with soda ash. Material should be placed in 55 gallon drums and transported to the furnace building for processing.

JOB DESCRIPTION

Job Title: Furnace Feedman

Function: The Furnace Feedman is responsible for charging the furnace using lead oxide, coke, and flux quantities specified by the furnace operator.

Technical Requirements: Must have an average learning ability and be capable of following instructions with minimum supervision from plant supervisor.

Training: Training must include proper clean up procedures, OSHA Right-to-Know, blood lead monitoring, respiratory equipment, industrial hygiene practices, reading and interpreting labels and MSDS, and Contingency Plan.

Duties and Responsibilities:

- Requires general knowledge about all phases of furnace operations including start-up, shutdown, and problems that might occur during operations.
- Must follow proper proportions of lead oxide, coke, and flux specified by the furnace operator.
- Except for major breakdowns, the operator must perform all maintenance required for day to day operations.
- Furnace feed ratio should be maintained to allow for consistent operations of furnace.
- Inspect gates, chutes and conveyor.
- Must be capable of operating a front-end loader to be used in furnace charging.
- Must report any safety hazards to your supervisor immediately.
- Must abide by all safety rules.
- Must maintain good housekeeping in all assigned work areas.

JOB DESCRIPTION

Job Title: Refinery Helper (Caster)

Function: Perform all tasks required by the refinery operator or plant supervisor which includes pouring, skimming, casting, and stacking of lead and lead alloys.

Technical Requirements: Requires no specific knowledge on starting job. Must have average learning ability and aptitude to operate the necessary job-related equipment, within the 3 month probationary time period.

Training: Training must include proper clean-up procedures, OSHA Right-to-Know, blood lead monitoring, respiratory equipment, industrial hygiene practices, reading and interpreting labels and MSDS, and Contingency Plan.

Duties and Responsibilities:

- Must follow instructions of refinery operator or plant supervisor.
- Upon completion of the probationary period, the helper will be able to perform repetitive operations under normal supervision.
- Must report any safety hazards to your supervisor immediately.
- Must abide by all safety rules.
- Must maintain good housekeeping in all work areas.
- Must perform pouring, skimming, casting, and stacking required during refinery operations.

JOB DESCRIPTION

Job Title: Refinery Operator

Function: Perform tasks associated with all phases of the refining and casting operation including supervision of the refinery helper(s). Production operator is responsible for production of high quality and quantity of lead and lead alloy from bullion.

Technical Requirements: Must have at least __ years of experience in the refining of lead and lead alloys, must be knowledgeable of chemical additives required to produce quality lead and lead alloy.

Training: Training must include proper clean up procedures, OSHA Right-to-Know, blood lead monitoring, respiratory equipment, industrial hygiene practices, reading and interpreting labels and MSDS, and Contingency Plan.

Duties and Responsibilities:

- Requires specific knowledge about all phases of refining and casting operations.
- Must possess knowledge of chemicals and procedures used in the refining and knowledge of start-up, shutdown, and any operational problems that may occur on a casting run.
- Must be capable of performing any job in the casting and refining department.
- Must be capable of filling in for the plant manager on an emergency basis.
- Must report any safety hazards to the plant manager immediately.
- Must maintain high quality and quantity of lead and lead alloy from bullion.
- Must abide by all safety rules.
- Must maintain good housekeeping in all work areas.

JOB DESCRIPTION

Job Title: Battery Breaker Operator

Function: Carries out assigned responsibilities to ensure employees assigned to saw operation function as a team and that production norms are met safely and accurately. The Battery Breaker Operator is responsible for monitoring shift quotas to meet the load requirements specified by the Furnace Operator.

Technical Requirements: Requires specific knowledge of machinery used in the battery breaking building. Must be able to perform minor maintenance on battery breaking machinery.

Training: Training must include proper clean-up procedures, OSHA Right-to-Know, blood lead monitoring, respiratory equipment, industrial hygiene practices, and Contingency Plan.

Duties and Responsibilities:

- Direct and supervise all saw personnel to ensure that assigned duties are safely and accurately executed.
- Remain constantly alert for health hazards, especially when handling dry materials or being exposed to smelter plant malfunction, taking such action as necessary to keep exposure to a minimum.
- Keep area clean; dry sweeping is not allowed by government regulations; always dampen area down prior to clean-up.
- Know how and when to activate and turn off all equipment.
- Report any safety hazards to the Battery Pad Foreman immediately.
- Changing saw blades on frequency. Require to meet production requirements.
- Be sure box washer is functioning properly at all times. Report malfunction to the Battery Pad Foreman immediately.
- Check the crew when reporting on shift to see that they are properly attired and have the proper safety equipment. Check respirators fit. Be sure eye protection is worn at all times.

Battery Breaker Operator (Cont'd)

- Train new hires in carrying out their assigned job, constantly impressing on them that they are working with lead, and what they can do each day to protect themselves.
- Consult with foreman on any grievance or problem that might arise.
- Make sure that plate & group production meets daily lead requirements for effective furnace efficiency.

JOB DESCRIPTION

Job Title: Battery Pad Foreman

Function: Supervise operation of Battery Cutting Area, including administrative requirements for the receipt of junk batteries. Supervision includes the hammermill crusher and sink and float separator.

Technical Requirements: Must have at least ____ years experience with the battery breaking operations. Must be able to perform maintenance on all battery breaking equipment.

Training: Training must include proper clean-up procedures. OSHA Right-to-Know, blood lead monitoring, respiratory equipment, industrial hygiene practices, management of container storage area, and Contingency Plan.

Duties and Responsibilities:

- Direct and supervise all work incidental to the operation of the battery processing area, including personnel and maintenance of equipment.
- Direct and supervise the receipt of all junk batteries.
- Maintain production standards as directed by Plant Manager.Superintendent.
- Requisition supplies used in connection with saw operations.
- Schedule work crews assigned to the department.
- Take action to correct absenteeism and tardiness.
- Train, instruct and supervise new employees in assigned area until employee meets job standard requirements. Job safety requirements will be emphasized.
- Analyze employee job performance in relation to established production standards. Counsel employee on job improvement. Initiate recommendation to transfer or discharge personnel in the best interest of both the employee and the company. In coordination with Plant Nurse, interviews and fill personnel vacancies.
- Check and approve employee time cards and record time spent in each department daily.

Battery Pad Foreman (Cont'd)

- Handle employee first-line grievances, consulting with Plant Superintendent when necessary.
- Act as Smelter Plant Foreman during temporary absence of Smelter Plant Foreman or when instructed to do so by Plant Manager.
- Insure that all lead bearing materials are picked up and moved to area of use. As time permits, be responsible for the removal of trash and salable junk accumulated in the area as directed by the Plant Superintendent or Plant Manager.
- Maintain a continuous safety program which will assure the wearing of earplugs and eye protective devices and other safety equipment by battery pad employees at all times.

JOB DESCRIPTION

Job Title: Furnace Operator

Function: Furnace Operator is responsible for keeping the tuyeres open, lead bullion flowing, and slag from the top hole running. He must supervise the topper and feedman to assure daily furnace production goals are met.

Technical Requirements: Furnace operator must have several years experience in furnace operation, metallurgy and charge preparation.

Training: Training must include proper clean-up procedures. OSHA Right-to-Know, blood lead monitoring, respiratory equipment, industrial hygiene practices, management of container storage area, and Contingency Plan.

Duties and Responsibilities:

- Direct and supervise all functions required to set up, operate, and burn down a furnace.
- Be continuously alert for health hazards, personally controlling all materials dumping and related scrap handling in such a manner that dust is kept to a minimum.
- Ensure that work area and dry materials are constantly kept damp.
- Assist Shift Foreman in checking furnace crew at the start of each shift to ensure that they are wearing proper clothing, have required safety equipment and that each man's respirator fits properly.
- Check constantly to ensure that each employee wears his required safety equipment, especially respirators and eye protection.
- In the event of malfunction or other activities causing an excessive amount of smoke or dust take immediate corrective action and contact the Shift Foreman immediately.
- Know how to clean a crucible, set a crucible, attach hoods and operate applicable exhaust and dust collection system.
- Know the basic functions of baghouse and dust collection screws.

Furnace Operator (Cont'd)

- Know how oxygen control works. Oxygen settings are not to be tampered with unless authorized by Shift Foreman.
- Report all problems and malfunctions to the Plant Manager immediately.
- Train all employees assigned to crew, outline assigned job responsibilities, present safe working procedures.
- Monitor the furnace water jacket temperature and adjust water flow.
- Keep crucible cleaned off to prevent a burn through between the water jacket and crucible.
- Collect slag and lead samples at designated intervals specified by the plant manager for chemical analysis.
- Work with maintenance to plan furnace repairs.

JOB DESCRIPTION

Job Title: Mobile Material Equipment Operator

Reports to: Furnace Operator, Battery Pad Foreman, or Refinery Operator.

Function: Operates forklift, front loaders and yard sweeper, performing materials handling operations requirement in a routine smelter operation. Operator must assist in all area of the plant for material transporting.

Technical Requirements: Must have a valid drivers license. Must be efficient with all mobile equipment to perform tasks efficiently and safely.

Training: Training must include proper clean-up procedures, OSHA Right-to-Know, blood lead monitoring, respiratory equipment, industrial hygiene practices, reading and interpreting labels and MSDS's, and Contingency Plan.

Duties and Responsibilities:

- Monitor the condition of front-end loader, forklift and sweeper used during a shift. May add oil, hydraulic fluid or other lubricants as required. Immediately informs maintenance man of any abnormal operating/mechanical condition.
- Fill out Driver's Report Form at end of each shift and gives same to shift foreman.
- Keep furnace crews supplied with furnace charge material in accordance with requirements of daily charge sheets. Operates yard sweeper as directed.
- Assist in pulling crucibles and drop out bins during burn-down.
- Assist in emptying sumps, handling slag, washing down area, unloading coke cars and any other incidental duties as assigned by shift foreman.
- Load non-hazardous waste slag on trailer.
- Must abide by all safety rules.

JOB DESCRIPTION

Job Title: Wastewater Treatment Plant Operator

Function: Maintains control of the operation to ensure a continual process, maximum operating time, and proper pH for neutralization of acid and removal of metals from wastewater.

Technical Requirements: Wastewater Treatment Plant Operator must have several years experience in treatment plant operations, water and acid chemistry, and equipment maintenance.

Training: Training must include proper clean up procedures, OSHA Right-to-Know, blood lead monitoring, respiratory equipment, industrial hygiene practices, reading and interpreting labels and MSDS, and Contingency Plan.

Duties and Responsibilities:

- Must be able to control all phases of wastewater treatment operations.
- Must be able to train employees on any phase of wastewater treatment.
- Must be familiar with the properties of all chemicals used in the treatment process.
- Must abide by all safety rules.
- Must communicate effectively with his supervisor and those employees under his control.
- Must be able to schedule other hourly treatment plant employees according to the operating requirements of the facility.
- Must maintain good housekeeping in all treatment areas.
- Must be familiar with monitoring procedures and instrumentation used in the treatment process.
- Is responsible for coordination of purchasing, maintaining and monitoring the usage of all treatment chemicals.
- Is responsible for control of chemical dosing and monitoring to maintain proper treatment.
- Is responsible for all operation and maintenance of the wastewater treatment system.

JOB DESCRIPTION

Job Title: Maintenance Leadman

Function: Perform maintenance of facility equipment as requested.

Technical Requirements: High degree of mechanical aptitude, trade school or several years experience.

Training: Training must include proper clean up procedures, OSHA Right-to-Know, blood lead monitoring, respiratory equipment, industrial hygiene practices, reading and interpreting labels and MSDS, and Contingency Plan.

Duties and Responsibilities:

- Maintains, repairs, assembles, disassembles, installs, dismantles and alters equipment.
- Knows and understands machine maintenance theory, practice and procedure.
- Uses mathematics involving decimals, fractions and principles of Algebra and Gemoetry, as required for the work within the classification.
- Determines methods and sequence of operations and makes layouts for the construction and the installation of special equipment.
- Determines operation sequence and methods to use when repairing, installing, assembling plant equipment.
- Does blue print layout and set-up for fabrication.
- Uses lathes to machine products needed.
- Uses precision measuring instruments.
- Performs operations of welding (high quality) by gas or electric arc, overhead (inverted) and on vertical surfaces.
- Provides, layout and installation of plumbing.
- Under the supervision or direction of the electrician, leadman, or plant engineer, may install large motors, transformer banks, panels. Maintains and trouble shoots electrical equipment.
- Provides training for maintenance helper.

Maintenance Leadman Cont'd.

- Reports any safety hazards to the supervisor immediately.
- Abides by all safety rules.
- Maintains good housekeeping in all work areas.

JOB DESCRIPTION

Job Title: Maintenance Helper

Function: Performs maintenance for facility equipment as required.

Technical Requirements: High degree of mechanical aptitude, trade school or past experience.

Training: Training must include proper clean up procedures, OSHA Right-to-Know, blood lead monitoring, respiratory equipment, industrial hygiene practices, reading and interpreting labels and MSDS, and Contingency Plan.

Duties and Responsibilities:

- To follow verbal and written instructions.
- Ability to use various hand and electric tools.
- To use such machines as saws, drill presses, pipe threaders, etc., in the performance of his work.
- To use mathematics involving decimals and fractions and including principles of algebra and geometry, as required for the work within this classification.
- An elementary knowledge of electricity, so as to recognize hazardous electrical conditions and do minor work such as splicing, taping, and insulating.
- Requires some degree of proficiency in gas and electric welding.
- Qualified to drive mobile equipment such as lift trucks, front-end loaders, etc.
- Ability to work from ladders and in other elevated locations.
- Reports any safety hazards to the supervisor immediately.
- Abides by all safety rules.
- Maintains good housekeeping in all work areas.

JOB DESCRIPTION

Job Title: Baghouse Operator

Function: Perform all tasks associated with the baghouse operations including day to day maintenance including monitoring all equipment for temperature and pressure. Must monitor baghouse filters, shake and replace bags and perform minor maintenance on baghouse machinery.

Technical Requirements: Baghouse Operator must have several years experience in baghouse operations. He is responsible for training and instructing the baghouse helper in all aspects of the baghouse operations.

Training: Training must include proper clean up procedures, OSHA Right-to-Know, blood lead monitoring, respiratory equipment, industrial hygiene practices, reading and interpreting labels and MSDS, and Contingency Plan.

Duties and Responsibilities:

- Must monitor and maintain blast furnace draft controls for draft fans.
- Must monitor and maintain baghouse draft controls for stack fans.
- Must monitor and maintain draft and stack fan outlet dampers.
- Must make sure bearings are properly cooled, lubricated, and vibrations minimized.
- Must monitor fan motors and notify maintenance when repairs are needed.
- Must monitor temperature, pressure, and flow measurements in the system.
- Must perform bag shaking for each baghouse section in a systematic way so as to allow for no downtime.
- Must monitor for overpressure and underpressure in the baghouse to reduce damage to the equipment.
- Must monitor and perform maintenance including the replacement of baghouse filters.
- Must maintain good housekeeping in all assigned work areas.
- Must abide by all safety rules.

JOB DESCRIPTION

Job Title: Furnace Tapperman

Function: The Tapperman is responsible for tapping the slag out of the furnace.

Technical Requirements: Operator must have average learning ability and be able to follow instructions with minimum supervision.

Training: Training must include proper clean up procedures, OSHA Right-to-Know, blood lead monitoring, respiratory equipment, industrial hygiene practices, reading and interpreting labels and MSDS, and Contingency Plan.

Duties and Responsibilities:

- Tapperman is responsible for tapping slag out of the furnace to make sure the slag is removed at the rate at which it is being produced.
- Must eliminate slag accumulation in the furnace that blocks tuyere.
- Must keep hoods over pots as much as possible to eliminate smoke and keep the area around the slag pot clean.
- Must make sure the tapper hole is clean.
- Must watch for any peculiarity in the slag. Changes should be reported to the furnace operator.
- Must repair and sharpen tapper bars.
- Must report any safety hazards to the furnace operator immediately.
- Must abide by all safety rules.
- Must maintain good housekeeping in all work areas.

JOB DESCRIPTION

Job Title: Yardman

Function: The Yardman is responsible for the proper storage of batteries and good housekeeping for the container storage area.

Technical Requirements: Must have an average learning ability and must be capable of following instructions with minimum supervision.

Training: Training must include proper clean up procedures, OSHA Right-to-Know, blood lead monitoring, respiratory equipment, industrial hygiene practices, reading and interpreting labels and MSDS, and Contingency Plan.

Duties and Responsibilities:

- Must assure proper storage of batteries and drums within the container storage area.
- Must make sure all batteries are upright and not leaking. All leaking batteries should be removed and placed in leakproof containers for processing.
- Must respond to all acid spills and cleanup spills with soda ash.
- Must inspect surface of container storage area for cracks and reports cracks to supervisor.
- Must maintain good housekeeping in and around the container storage area.
- Must keep mobile equipment washed clean to prevent spillage in yard.
- Must abide by all safety rules.
- Must keep yard washed down and wet.

EPA SAMPLING AND DECONTAMINATION PROTOCOL

Soil Investigation Procedures

Sample Control

The key for soil sample locations are described below.

Site Code	Sample Code	Sequence Number	Location
-----	-----	-----	-----
###-0#	SS	001	

Containers and Preservatives

Soil sample container and preservative requirements are listed below.

Compound	Container	Cooling	Preservative
-----	-----	-----	-----
Metals (Lead, Arsenic, Cadmium)	8 oz. glass open mouth, Teflon-lined cap	4 °C	none

Field Equipment

The following equipment may be used for soil sampling.

1. Field log book
2. Sample containers
3. Stainless steel spoon or stainless steel hand auger
4. Pyrex or stainless steel bowl
5. Sample shipping material
 - i. ice or vermiculite
 - ii. plastic bags
 - iii. ice chest
 - iv. black vinyl tape

6. Sample tags
7. Sample seals
8. Field sampling forms
9. Chain-of-custody forms
10. Decontamination equipment
 - i. brushes
 - ii. pesticide-grade isopropanol
 - iii. phosphate-free detergent
 - iv. organic-free water
 - v. wash buckets
 - vi. aluminum foil

Personnel Protection Equipment

The personnel protection equipment required for the collection of surface soil samples is Level D protection. Level D protection is the standard work uniform with the addition of uncontaminated rubber gloves.

Sample Traffic Control

Samples collected in this activity are classified as environmental samples. Samples for immediate analysis will be collected in appropriate containers and packed in metal ice chests for delivery to the laboratory. No precautionary labels are required on the containers exterior. All sample holding times will be monitored.

Specific Sampling Protocol

1. The sample area will not be disturbed prior to the collection of the sample.

2. Prior to handling the sample container, the sampler will don uncontaminated rubber gloves.
3. The sampler will, if required, remove any vegetation located above the sample location.
4. The sampler will bore into the soil with a stainless steel spoon or a hand auger to the designated sample depth removing any stones, grass or twigs.
5. With the sample container in hand, the sampler will collect the subsurface soil in a pyrex or stainless steel bowl, mix the sample until homogenous, and transfer the homogeneous soil to sample container.
6. A photograph will be taken of the sampling activity and the sample location.
7. The sample container will be closed, using black vinyl tape to secure the container.
8. Complete sample documentation will be entered in a log book. The information will include the time, date, and place of sample taken or measurement. The log book will contain the identity of the sampler(s), a description of the sample location, the type analysis to be performed on the sample, and documentation of any situation that could affect the integrity of the sample.
9. The sampler will label all sample packages, and pack samples in ice or vermiculite for shipment.
10. The sampler will maintain chain-of-custody documentation for the samples.
11. The sampler will arrange for transport of samples to the laboratory for analysis.
12. The sampler will advise the laboratory of the sample shipment.

Laboratory Analytical Method

Samples collected for chemical analysis will be analyzed for lead, arsenic and cadmium in accordance with the United States Environmental Protection Agency publication SW-846, Test Methods

for Evaluating Solid Wastes.

WATER SAMPLING PROTOCOL

Sample Control

The key for wash water and selected samples are listed below.

Site Code -----	Sample Code -----	Sequence Number -----	Location -----
###-0#	WW	001	
###-0#	SL	001	

Containers and Preservatives

The following describes the proper containers and preservatives for the wash water and selected samples.

Wash water and Selected Samples

Compound -----	Container -----	Cooling -----	Preservative -----
Metals (Lead & Cadmium)	1 liter plastic	none	HNO ₃

Field Equipment

The following equipment will be used for wash water and select sampling.

1. pH buffer
2. pH meter
3. Conductivity meter
4. Thermometer
5. Field log book
6. Waders
7. Sample containers
8. Sampling instruments
 - i. stainless steel spoon

- ii. shovel
 - iii. stainless steel hand auger
 - iv. pyrex or stainless steel bowl
- 9. Sample shipping material
 - i. ice or vermiculite
 - ii. plastic bags
 - iii. ice chest
 - iv. black vinyl tape
- 10. Chemical preservatives
- 11. Sample tags
- 12. Sample seals
- 13. Field sampling forms
- 14. Chain-of-custody forms
- 15. Decontamination equipment
 - i. brushes
 - ii. pesticide-grade isopropanol
 - iii. phosphate-free detergent
 - iv. organic-free water
 - v. wash buckets
 - vi. aluminum foil

Personnel Protection Equipment

The personnel protection equipment required for the collection of surface water and sediment samples is Level D protection. Level D protection is the standard work uniform with the addition of disposal rubber gloves.

Sample Traffic Control

Samples collected in this activity are classified as

environmental samples . Samples will be collected in appropriate containers and packed in metal ice chests for delivery to the laboratory. No precautionary labels are required on the containers exterior. All sample holding times will be monitored and no sample will exceed a maximum holding time of one week.

WASH WATER SAMPLING PROTOCOL

1. The samples will be taken from the furthest point down slope of the area being washed.
2. Water samples to be collected should be well mixed.
3. If it is necessary to wade in the water to collect a sample, the sampler will be careful not to disturb the bottom sediment and will enter downslope of the sampling point.
4. Prior to handling the sample container, the sampler will don uncontaminated rubber gloves.
5. With the sample container in hand, the sampler will lower the bottle into the water with the container opening facing upslope.
6. A photograph will be taken of the sampling activity and the sample location.
7. The temperature and pH of the water to be sampled will be determined. The measurements may be taken from the body of water itself or from a separate sample container collected from the same location.
8. Chemical preservatives, will be added, if applicable.
9. The sample container will be closed, using black vinyl tape to secure the container top to prevent leakage.
10. Sample documentation will be completed in the log book. The information will include the time, date, and place of sample taken or measurement. The log book will contain the identity of the sampler(s), a description of the sample location, the type analysis to be performed on the sample, and documentation of

any situation that could affect the integrity of the sample.

11. The sampler will label all sample packages and pack the samples in ice or vermiculite for shipment.
12. The sampler will maintain chain-of-custody documentation for the samples.
13. The sampler will arrange for transporting samples to the laboratory for analysis.
14. The sampler will advise the laboratory of the sample shipment.

Laboratory Analytical Method

Samples collected for chemical analysis will be analyzed for lead and cadmium in accordance with the United States Environmental Protection Agency publication SW-846, Test Methods for Evaluating Solid Wastes.

SAMPLE CONTROL PROCEDURES

Equipment Decontamination

Sampling equipment will be washed with phosphate free detergent and rinsed with potable water to remove visible contamination. Following the removal of visible contamination, the equipment will be:

- * Rinsed with organic-free water
- * Rinsed with pesticide-grade isopropanol
- * Rinsed with organic-free water
- * Allowed to air dry completely and be wrapped in aluminum foil for storage

The drilling and boring equipment will be decontaminated using the following procedures:

- * Sand blast, if necessary, to remove all rust or paint before the initial use
- * Remove visible contamination using a steam cleaner
- * Wash with phosphate-free detergent
- * Rinse with organic-free water
- * Rinse with pesticide-grade isopropanol
- * Rinse with organic-free water and allow to air dry completely

Field Log Book Entry Procedures

Field log books provide the means of recording all data and measurements activities conducted at the facility. All entries will be as detailed and descriptive as possible, so that a particular activity can be re-constructed without the memory of the sampler. All measurements made and samples collected will be recorded. No erasures are permitted. If incorrect entries are made, the error will be crossed out by a single line, initialed, and dated. All entries will be made with indelible ink.

Chain-of-Custody Records

A chain-of-custody record will be completed for each sample requiring laboratory analysis. The following guidelines will be implemented to complete the record form:

1. The project name will be recorded
2. The form will be signed by all samplers
3. The sample code will be record for each sample
4. The time and date of sample collection will be recorded
5. The type of sample will be indicated
6. A brief description of the sample location will be given
7. The total number of sample containers per sample will be indicated
8. The identification label number will be recorded
9. The type of analysis requested and number of sample containers required for the analysis for each sample will be indicated
10. The individual signing the custody seal who relinquishes the sample to the transporter will be given. The transporter will sign the form upon receiving the sample, and will require the laboratory to sign upon receiving the sample. The signatures on the form shall correspond to the individuals handling the sample.

The serial number of the chain-of-custody record form serial number will be recorded in the field log book. The shipping date of transporting, the transporter, and the laboratory receiving the samples shall be recorded.

Sample Container Labeling

For each sample to be analyzed, a separate sample identification tag will be attached to the sample container. The sample identification labels shall contain the following

information:

1. The time and date the sample was collected.
2. A description of the sample location.
3. The signature of the sampler.
4. A description of the type of sample (i.e. Soil, sediment, groundwater)

The identification labels will be sequentially numbered, and the label numbers will be recorded in the field log book.

Sample Handling and Shipping

The samples collected at this facility are considered as environmental samples. Environmental samples are those which contain low levels of contaminants and require implementation of limited precautionary measures. These samples will be collected in appropriate containers allowing approximately 10 percent air space so that the sample can expand in the container at high temperatures. The sample will be sealed and labeled, then placed inside a metal ice chest and packed with vermiculite so to prevent breakage. For those samples requiring cooling to 4°C, ice will be placed inside the metal ice chest to allow for proper cooling. The ice chest shall be sealed to prevent tampering with the samples.

Statistical Method

The following statistical method will be used to compare groundwater quality at the facility.

Cochran's Approximation To The Behrens-Fisher Students t-Test

Using the available background data, a background mean (X_B) and background variance (S^2_B) is calculated. For any set of data ($X_1, X_2 \dots X_n$) the mean is calculated by:

$$\bar{X} = \frac{X_1 + X_2 \dots + X_n}{n}$$

and the variance is calculated by:

$$s^2 = \frac{(X_1 - \bar{X})^2 + (X_2 - \bar{X})^2 \dots + (X_n - \bar{X})^2}{n-1}$$

where n denotes the number of observations in the set of data.

The t-test uses these data summary measurements to calculate a t-statistic (t-stat) and a comparison t-statistic (t-comparison). The t-stat value is compared to the t-comparison value and a conclusion is reached as to whether there has been a significant change in any indicator parameter.

The t-statistic is calculated as follows:

$$t\text{-stat} = \frac{X_M - \bar{X}_B}{\sqrt{\frac{S_M^2}{n_M} + \frac{S_B^2}{n_B}}}$$

The t-statistic (t-comparison), against which t-stat will be compared, necessitates finding t_B and t_M from standard tables where:

t^B = t-tables with (n-1) degrees of freedom, at the 0.01 level of significance.

t_M = t-tables with ($n_M - 1$) degrees of freedom, at the 0.01 level of significance.

Finally, the special weightings W_B and W_M are defined as:

$$W_B = \frac{S_B^2}{n_B} \quad \text{and} \quad W_M = \frac{S_M^2}{n_M}$$

$$t\text{-comparison} = \frac{W_B t_B = W_M t_M}{W_B + W_M}$$

The t-stat is now compared with the comparison t-comparison using the following decision-rule:

If t-stat is equal to or larger than t-comparison, then conclude that there most likely has been a significant increase in this specific parameter.

If t-stat is less than t-comparison, then conclude that most likely there has not been a change in this specific parameter.

APPENDIX G
CERTIFICATION OF LIABILITY



**United Coastal
Insurance Company**

233 Main Street • P.O. Box 2350
New Britain, Connecticut 06050-2350
(203) 223-5000

RECEIVED MAY 18 1993

WMD RCRA

RECORD CENTER

Para A

CERTIFICATE OF INSURANCE

THIS IS A CLAIMS MADE POLICY

This certificate is issued as a matter of information only and confers no rights upon the certificate holder. This certificate does not amend, extend or alter the coverage afforded by the policies listed below.

NAME AND ADDRESS OF AGENCY

Lipscomb & Pitts Company
651 South Cooper Street
Memphis, Tennessee 38104-5393

NAME AND ADDRESS OF INSURED

Refined Metals Corporation
P.O. Box 9009
Memphis, Tennessee 38109

IND 000 918 130

This is to certify that policies of insurance listed below have been issued to the insured named above and are in force at this time. Notwithstanding any requirement, term or condition of any contract or other document with respect to which this certificate may be issued or may pertain, the insurance afforded by the policies described herein is subject to all the terms, exclusions and conditions of such policies. **THIS IS A CLAIMS MADE POLICY.**

COVERAGES	POLICY NO.	POLICY EXPIRATION DATE	Limits of Liability in Thousands (000)		
				EACH OCCURRENCE	AGGREGATE
COMMERCIAL GENERAL LIABILITY <input type="checkbox"/> PREMISES — OPERATIONS <input type="checkbox"/> PRODUCTS COMPLETED OPERATIONS HAZARD <input type="checkbox"/> BROAD FORM PROPERTY DAMAGE <input type="checkbox"/> INDEPENDENT CONTRACTORS <input type="checkbox"/> PERSONAL INJURY <input type="checkbox"/> OTHER			ALL COVERAGES, BODILY INJURY AND PROPERTY DAMAGE COMBINED (INCLUDING DEFENSE COSTS)	\$	\$
EXCESS LIABILITY <input type="checkbox"/> UMBRELLA FORM <input type="checkbox"/> OTHER THAN UMBRELLA FORM			BODILY INJURY AND PROPERTY DAMAGE COMBINED	\$	\$
OTHER Hazardous Waste Storage & Treatment Facility	HW0011	05/01/94		\$1,000,	\$2,000,

DESCRIPTION OF OPERATIONS/LOCATIONS

Hazardous Waste Storage & Treatment Facility Located at:

3700 South Arlington Avenue
Indianapolis, Indiana 46107

257 West Mallory Avenue
Memphis, Tennessee

See Attached

Cancellation: Should any of the above described policies be cancelled before the expiration date thereof, the issuing company will endeavor to mail 30 days written notice to the below named certificate holder, but failure to mail such notice shall impose no obligation or liability of any kind upon the company.

NAME AND ADDRESS OF CERTIFICATE HOLDER:

United States Environmental Protection Agency
Region Five
77 West Jackson Boulevard
Chicago, Illinois 60604

DATE ISSUED April 29, 1993 SB

AUTHORIZED REPRESENTATIVE



United Coastal Insurance Company

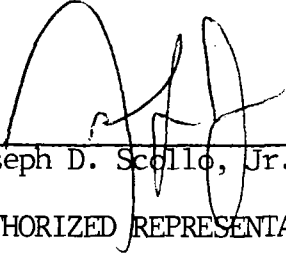
233 Main Street • P.O. Box 2350
New Britain, Connecticut 06050-2350
(203) 223-5000

HAZARDOUS WASTE FACILITY CERTIFICATE OF LIABILITY INSURANCE

1. United Coastal Insurance Company, (the "Insurer") of 233 Main Street, New Britain, CT 06050, hereby certifies that it has issued liability insurance covering bodily injury and property damage to Refined Metals Corporation, (the "Insured") of P.O. Box 9009, Memphis, TN 38109, in connection with the insured's obligation to demonstrate financial responsibility under Tennessee Department of Health and Environmental Rules 1200-1-11-06(8)(N) or 1200-1-11-05-(8)(N). The coverage applies at #IND067690040, Refined Metals Corporation, 257 W. Mallory Ave., Memphis, TN and at #IND000718130 Refined Metals Corporation, 3700 S. Arlington Ave., Indianapolis, IN 46107 for "Sudden Accidental Occurrences". The limits of liability are \$1,000,000. each occurrence and \$2,000,000 annual aggregate, exclusive of legal defense costs. The coverage is provided under policy number HW0011 issued on May 1, 1993. The effective date of said policy is May 1, 1993.
2. The Insurer further certifies the following with respect to the insurance described in Paragraph 1:
 - (a) Bankruptcy or insolvency of the insured shall not relieve the Insurer of its obligations under the policy.
 - (b) The Insurer is liable for payment of amounts within any deductible applicable to the policy, with a right of reimbursement by the Insured for any such payment made by the Insurer. This provision does not apply with respect to that amount of any deductible for which coverage is demonstrated as specified in 1200-1-11-06(8)(n)6 or 1200-1-11-05(8)(n)6.
 - (c) Whenever requested by the Commissioner of the Tennessee Department of Health and Environment or his designee, the Insurer agrees to furnish to the Commissioner or his designee a signed duplicate original of the policy and all endorsements.
 - (d) Cancellation of the insurance, whether by the Insurer or the Insured, will be effective only upon written notice and only after the expiration of sixty (60) days after a copy of such written notice is received by the Commissioner or his designee.

- (e) Any other termination of the insurance will be effective only upon written notice and only after the expiration of thirty (30) days after a copy of such notice is received by the Commissioner or his designee.

I hereby certify that the wording of this instrument is identical to the wording specified in 1200-1-11-06(8)(p) 7, as such rule was constituted on the date first above written, and that the Insurer is licensed to transact the business of insurance or eligible to provide insurance as an excess or surplus lines insurer in one or more states.



Joseph D. Scollo, Jr. - Senior Vice President - Operations

AUTHORIZED REPRESENTATIVE OF:

United Coastal Insurance Company
233 Main Street
New Britain, CT 06050
April 29, 1993



United Coastal
Insurance Company

233 Main Street • P.O. Box 2350
New Britain, Connecticut 06050-2350

H-75

HARTFORD CT 061 #14 04/29/93 20:47

United States Environmental Protection Agency
Region Five
77 West Jackson Boulevard
Chicago, Illinois 60604

60604-3511 10



Refined Metals Corporation **FILE**

October 17, 1989

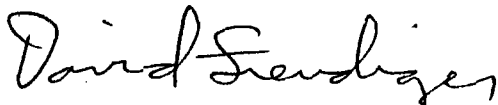
IND 000718/30

Mr. Thomas E. Linson, Acting Chief
Plan Review & Permit Section
Office of Solid & Hazardous Waste Mgmt
Indiana Department of Environmental Mgmt
105 South Meridian Street
P.O. Box 6015
Indianapolis, Indiana 46206-6015

Dear Mr. Linson:

Enclosed is an irrevocable standby letter of credit for closure at our Beech Grove, Indiana plant. Please add this to our Part B permit application. Thank you.

Sincerely,



David Freudiger

Enclosure

CC: Mr. Hak Cho
Mr. Ronald Widner

RECEIVED
OCT 23 1989

RCRA-IMS
U.S. EPA, REGION V

RECEIVED
NOV 01 1989
OFFICE OF RCRA
WASTE MANAGEMENT DIVISION
EPA, REGION V

RECEIVED
JUL 19 1964
U.S. AIR FORCE

EMI-AROX
7 NOV 63 10:00 AM

Except so far as otherwise expressly stated, this documentary credit is subject to the "Uniform Customs and Practice for Documentary Credits" (1983 Revision) International Chamber of Commerce (Brochure No. 400 or subsequent revisions).

IRREVOCABLE STANDBY LETTER OF CREDIT

DOCUMENTARY CREDIT NUMBER 28652

DATE OF ISSUE: 04OCT89

ADVISING BANK

APPLICANT

REFINED METALS

3700 SOUTH ARLINGTON

INDIANAPOLIS, IN., 46203

BENEFICIARY

TECHNICAL SECRETARY

ENVIRONMENTAL MANAGEMENT BOARD

STATE OF INDIANA

AMOUNT

USD ***37,164.00**

THIRTY SEVEN THOUSAND ONE HUNDRED AND

SIXTY FOUR AND 00/100 USD

EXPIRY DATE AND PLACE: 15SEP90 OUR OFFICE

WE HEREBY ESTABLISH OUR IRREVOCABLE STANDBY LETTER OF CREDIT NO.

28652 IN YOUR FAVOR, AT THE REQUEST AND FOR THE ACCOUNT OF

REFINED METALS, 3700 SOUTH ARLINGTON, INDIANAPOLIS, IN., 46203 UP

TO THE AGGREGATE AMOUNT OF THIRTY-SEVEN THOUSAND, ONE HUNDRED

SIXTY-FOUR AND NO/100 U.S. DOLLARS \$37,164.00, AVAILABLE UPON PRE-

SENTATION OF:

(1) YOUR SIGHT DRAFT, BEARING REFERENCE TO THIS LETTER OF CREDIT NO. 28652, AND

(2) YOUR SIGNED STATEMENT READING AS FOLLOWS: "I CERTIFY THAT THE AMOUNT OF THE DRAFT IS PAYABLE PURSUANT TO REGULATIONS ISSUED UNDER AUTHORITY OF THE INDIANA ENVIRONMENTAL MANAGEMENT LAW (IC 13-7) AS AMENDED."

THIS LETTER OF CREDIT IS EFFECTIVE AS OF OCTOBER 4, 1989 AND SHALL

EXPIRE ON SEPTEMBER 15, 1990, BUT SUCH EXPIRATION DATE SHALL BE

AUTOMATICALLY EXTENDED FOR A PERIOD OF ONE YEAR ON SEPTEMBER 15,

1990 AND ON EACH SUCCESSIVE EXPIRATION DATE, UNLESS, AT LEAST

ONE HUNDRED TWENTY (120) DAYS BEFORE THE CURRENT EXPIRATION DATE,

WE NOTIFY BOTH YOU AND REFINED METALS BY CERTIFIED MAIL THAT WE

HAVE DECIDED NOT TO EXTEND THIS LETTER OF CREDIT BEYOND THE CURRENT

EXPIRATION DATE. IN THE EVENT YOU ARE SO NOTIFIED, ANY UNUSED PORTION

OF THE CREDIT SHALL BE AVAILABLE UPON PRESENTATION OF YOUR SIGHT

DRAFT FOR ONE HUNDRED TWENTY (120) DAYS AFTER THE DATE OF RECEIPT BY

BOTH YOU AND REFINED METALS, AS SHOWN ON THE SIGNED RETURN RECEIPTS.

WHENEVER THIS LETTER OF CREDIT IS DRAWN ON UNDER AND IN COMPLIANCE

WITH THE TERMS OF THIS CREDIT, WE SHALL DULY HONOR SUCH DRAFT UPON

PRESENTATION TO US, AND WE SHALL DEPOSIT THE AMOUNT OF THE DRAFT

DIRECTLY INTO THE STANDBY TRUST FUND OF REFINED METALS IN
ACCORDANCE WITH YOUR INSTRUCTIONS.

WE CERTIFY THAT THE WORDING OF THIS LETTER OF CREDIT IS IDENTICAL
TO THE WORDING SPECIFIED IN 320.1 IAC 2-22-29 AS SUCH REGULATIONS
WERE CONSTITUTED ON THE DATE SHOWN IMMEDIATELY BELOW.

THIS CREDIT IS SUBJECT TO ARTICLE 5 OF THE UNIFORM COMMERCIAL [SIC.]
CODE (IC 26-1-5-101 THROUGH IC 26-1-5-117 SET FORTH [SIC.]
INDIANA'S VERSION OF ARTICLE 5 OF THE UNIFORM COMMERCIAL [SIC.] CODE).

FIRST TENNESSEE BANK NATIONAL ASSOCIATION

[Handwritten Signature]

AUTHORIZED SIGNATURE-TITLE

Aphanie Russell

AUTHORIZED SIGNATURE-TITLE

3000
N 12000

5000
N 12000

NOTES: Accuracy Specifications

- a. Contours - Ninety (90) percent of the elevations determined from the solid line contours of this topographic map shall have an accuracy with respect to true elevation of overhead (100) contour interval or better and the remaining ten (10) percent of such elevations shall be not in error by more than one contour interval. In densely wooded areas where heavy brush or tree cover fully obscures the ground and the contours are shown as dashed lines, they shall be plotted as accurately as possible from the stereoscopic model, while making full use of spot elevations obtained during ground control surveys and all spot elevations measured photogrammetrically in places where the ground is visible.
- b. This map was compiled by Lowe Engineers, Inc. using photogrammetric methods. Contours portrayed as dashed or broken lines represent areas of dense vegetation and should be considered approximate. This map has not been field verified. Prior to use as a basis for design/construction, it should be field verified.



TOPOGRAPHIC SURVEY
LAKE ENGINEERING & DEVELOPMENT, INC.
REFINED METALS
BEECH GROVE, INDIANA

SCALE 1"=100'
CONTOUR INTERVAL 1'
DATE OF COMPILATION 12/1/88
DATE OF PHOTOGRAPHY 10/13/88

COMPILED BY: E.M.K./M.K.
EDITED BY: E.M.K.
APPROVED BY: